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## SOME COGNITIVE ASPECTS OF MOTIVATION<sup>1</sup>

W. C. H. PRENTICE

*Swarthmore College*

**I**DEALLY, a presidential address should be a contribution to knowledge. Unfortunately, we are not always wise enough to choose presidents who can provide such a contribution. In my case, I can plead circumstance and thereby assure you without what might seem like false modesty that I am a president who cannot supply you with new and exciting facts. For reasons that are unimportant to you, I have been unable to get back into the laboratory for a number of years. Instead I dream about what I would like to do were I free to enter a new field of research and explore a new set of techniques. Perhaps I shall regain that freedom. In the meantime, I should like to share with you some of my dreams and hope that you may be inspired to do some of the exploring yourselves.

Off and on for a number of years, I have been identified with a controversial point of view, namely, the view that perception is not governed by motivation. Today I shall introduce a new element of controversy by turning the topic upside down and asking you to consider the possibility that what we call motives are really a particular kind of perceptual or cognitive event. To some of you that may sound like nonsense or worse, but let me see if I cannot make some kind of sense out of it for you. Certainly motivational theory is in the doldrums, and if I can suggest a new slant on old problems, some good may result even from views that you ultimately reject, just so long as you reject them on empirical grounds—which will mean doing new research and adding to our pathetically small store of facts in the field of human motivation.

Partly because scientists are intelligent and versatile and diligent in their search for chinks in the armor of nature through which to peer for understanding, partly because of the extraordinary complexity of human psychological problems, and partly through accidents of the history of our

discipline, we have come to mean several different things when we refer to understanding or explanation in psychology. To some of us, it is clear that a satisfactory explanation of a human activity must be made in neurological terms; to others, the explanatory framework can only be that of depth psychology; to still others, introspection or self-description may provide satisfactory accounts; and finally, a large group of us feels that some kind of formal theoretical model ultimately provides the only satisfactory clarification of the question "Why?" as it relates to human behavior. The approaches I have listed are not mutually exclusive, some combinations and overlap are possible; or some of us may hold to one for certain kinds of problem and another for certain others, depending on the stage of development of information in the particular case.

What I wish to suggest, however, is that our stage of development in the field of motivation is so primitive that none of these implicit definitions of "understanding" in psychology is appropriate, and that instead we should be searching for laws of behavior in what I can only call, with gratitude to (but also with apology to) Kurt Lewin, cognitive structure.

Consider with me a single case. Smith has struck Jones a violent blow. The psychologist is called on to tell why he did it.

In our present state of ignorance, no neurological answer is possible, and if it were, it would merely push the question back one step: why did that set of neurological patterns occur?

An account in terms of unconscious wishes and fears or of struggles between ego and superego may provide some intellectual satisfaction, but it leaves us in doubt about how we may ever predict such outbreaks in the future or how we may prevent them. In short, it gives us an idiosyncratic account that cannot be generalized very usefully. Moreover, there are systematic difficulties resulting from our ignorance and the consequent necessity of our relying on a large number of highly questionable assumptions.

<sup>1</sup> Delivered September 1960 in Chicago, Illinois, as the Address of the retiring President of the Division of General Psychology of the American Psychological Association.

If we turn instead to the culprit's own account of his motivation, we may get some interesting information, but we are very likely to get one of the following answers or some variant of it. "I don't know." "I don't like him." "I was angry." "It seemed like a good idea at the time." None of these helps much. Even the three last, which seem to hint at something useful, inspire primarily the further question, "But why?" When we ask it in such cases, we increase our chances of finally getting the inevitable, "I don't know."

Formal models are appealing. Modern behavior theory in its several forms does give at its best the possibility of deducing from antecedent conditions the behavior that must occur. A highly satisfactory kind of "understanding" to be sure, and probably for most of us an ultimate one. The trouble is that behavior theory is based on very primitive postulates, ones drawn from research on sharply limited kinds of behavior, and in 1960 it simply is not capable of encompassing our problems. It will not be able to help us until the complexities of human adult behavior have been reduced to manageable dimensions by careful descriptive investigation. Only then will we be able to discover whether or not the dimensions of maze and Skinner box can be adapted to fit the psychological problems of everyday life. And it is in the hope of stimulating your interest in that task that I stand before you today.

We desperately need to discover the dimensions of motivated behavior, and I think we are ready to make a start on that voyage of discovery if we will only take a careful and systematic but unbiased look at the phenomena of motivation. I think we can find there clues for a structural approach to our common problems that can lead in time to the construction of genuinely helpful formal models and deductive systems.

Let me return to Smith. There is one kind of comment the psychologist might make that strikes me as helpful. He may say, "He was jealous." There is a surprising amount of psychological content and tentative understanding of Smith's behavior embedded in that simple statement. We at least think we understand what it means to be jealous and what sort of behavior can be expected to ensue. By saying he was jealous, we are describing in a crude way a moderately complex psychological pattern. Jealousy can only be understood as involvement in a particular kind of interpersonal

relationship and the holding of certain kinds of cognitive attitude and belief about it.

Now, to be sure, the kind of understanding is partial and incomplete, but I am suggesting that it carries with it the seeds of a progressively more complete and more satisfying understanding, if we are willing to do the requisite research. We are in somewhat the same intellectual position as the man who explains the origin of a fire as spontaneous combustion in a pile of oily rags on the cellar floor. The fire is explained very satisfactorily for certain purposes, but since not all piles of oily rags burst into flames, we are given insufficient information to let us predict where the next fire will occur or to tell householders exactly when such conditions are or are not dangerous. But merely knowing that the heat was generated in that place under those roughly describable conditions gives us a start and suggests numerous experiments with the variables of temperature, moisture, pressure, materials, etc. which should in principle give us detailed and generalizable answers to our questions.

Clearly my example of Smith hitting Jones because of jealousy is a randomly chosen example. Innumerable other situations would illustrate the same methodological point. In everyday discourse we treat each other as having chosen or avoided particular activities because they appear to be attractive or threatening, respectively; because they look easy or hard; because they appear to belong to (or be antithetical to) a particular social role. But we do not probe further to try to discover what, in detail, it means for something to seem "difficult" or "threatening" or "appropriate to my role." Systematic analysis of the phenomena of motivation has been almost entirely omitted from psychology. We recognize dimly that our understanding of Smith is furthered somehow by knowing that he was jealous, but we do not really know why or how, because we have not tried to dissect the thing called jealousy and classify it. And the same is true of almost every other motivational situation.

It is interesting though ironic that we know much more about motivation as a set of techniques than we do about motivational principles. In various ways, we do successfully create for others psychological situations that lead them to do what we hoped and predicted they would do. Almost never are we able to give a systematic account of why our efforts were effective. Salesmen and advertisers,

teachers and political leaders, parents and orchestra directors, friends and neighbors, and husbands and wives dimly understand and certainly use a principle that has never been part of scientific theory, namely, that you can influence another person, create motives in him, if you like, by manipulating his conception of the situation in which he finds himself.

The admirable parsimony of behavior theories like Hull's, or the learning theory of Thorndike to which it owes so much, has led several generations of academic theorists to persist in the attempt to deal with motivation without reference to cognition as such. We have, in fact, continued to hope that we could do away with motivational problems by explaining all behavior in terms of instigation by stimuli, merely noting that the conditions of instigation include the prior influence of what we call positive and negative reinforcement on the formation of habits. But the system has not worked. The motivational problems will not go away. Let me remind you of two roughly symmetrical ones dealing respectively with the long-term effects of positive and negative reinforcement.

One way of asking the question I have in mind, would be in terms of behavior theory itself. "Can the conditions of reinforcement (either positive or negative) be themselves changed by training?" Or, a bit less obscurely, "May learned responses take on permanently the character of what Thorndike called states that the animal will seek or avoid."

In everyday language, the problem is this. When we repeatedly reward a kind of behavior, do we ever reach a state where that behavior is now permanently attractive in its own right and as predictable and characteristic an aspect of the organism as was the tendency to repeat responses followed by (e.g.) food in the first place? Of course, this is the problem of what Gordon Allport calls functional autonomy. Is it really true that states of affairs to be sought or prolonged by the organism can be *created* by training, or does training only strengthen the probability of responses leading to states innately sought by that animal?

As long ago as 1937, Allport provided us with convincing examples of just such acquired motives, and all the attempts of alternative theories to explain them away have failed. We must take as a fact of nature the finding that, in man at least, genuine and permanent "reinforcers" may be acquired during the individual's lifetime. Some adult

motives do seem to have all the characteristics of bodily needs despite having obviously been acquired through some kind of training or experience. The grave difficulty is that we know nothing about the conditions of such training, if indeed the training is to be held responsible. Some acts long performed in the service of a basic satisfaction ultimately seem to become self-sustaining; others do not. Which are the differences among them? Does the difference really lie, as is so often proposed, in the nature of the reinforcement or in its frequency? Or should we not ask whether it lies in the nature of the acts themselves?

Functional autonomy has, of course, a parallel case on the negative side. When certain behavior is followed repeatedly by unsatisfactory states and finally ceases to occur, have we created new motives or merely created a habit that is inconsistent with the old response? When we reduce the frequency of a particular response by punishing it, have we weakened the instigation to that response or merely blocked its expression? There is a brand of radical behaviorism that would claim my question is trivial or meaningless or both, but that is a mistaken view. We cannot shrug off as merely verbal the question of whether the psychological nature of the organism may be so changed that a state of affairs natively satisfying becomes permanently discomforting. Our question is roughly equivalent to asking of a physical system whether we prevented an explosion by building thicker walls and thus containing the pressure or whether we got rid of the pressure. The two answers have genuinely different consequences for many uses to which we might wish to put the system. And so they do for the psychological parallel. Psychoanalytic theory emphasizes this problem, and clinical evidence of continued strong tendencies toward acts long suppressed by punishment is pretty impressive. Rats which are taught to press a bar for food, then shocked for the same response, and finally allowed to return to the bar pressing situation without shock sometimes show comparatively little loss of the originally learned instigation toward bar pressing, though the shock may have temporarily reduced the response level to zero.

But what about the cases where the opposite appears to occur? A child becomes ill after eating a favorite food and later finds that food permanently distasteful. A game or a place of residence or a companion once loved is made hateful by

continual disappointment or injustice and thereafter serves as a negative reinforcement for activities connected with it, though it used to play a positive role. If indeed such things really occur, they raise the same kinds of questions as those raised by claims for functional autonomy. Under what conditions does such fundamental psychological change occur? And under what conditions does mere suppression of a response occur? Is it only the strength and frequency of the punishment that are important, as traditional theories would hold? Or are not other more complex matters worth investigating?

Surely it is naive, for example, to persist in using Thorndike's "state of affairs which the animal avoids and abandons" as the definition of negative reinforcement and to treat it without differentiation. It is one thing to abandon a bad tasting food; it is quite another to abandon an unhappy marriage; and it is still another to abandon a burning building. Even a simple slap from a parental hand can be a very different matter taken in play from what it is when set in the context of deterrence.

I have probably digressed far enough in trying to make clear some illustrations of my conviction that we have persisted too long in the use of artificial unidimensional concepts instead of investigating the variety and richness that we know exists within what we call reward or punishment. We will not answer the fundamental questions about how motives are acquired until we give up the fiction that the psychological consequences of an act may vary only in one dimension, ranging from strongly negative to strongly positive. We must start with a more naturalistic approach and try to discover what are the true dimensions of effect and then proceed to manipulate experimental situations in terms of those dimensions. Perhaps we will thus finally begin to throw some light on the differences between habitual responses that become autonomous and those that extinguish, between punished responses that bounce back with all their original vigor when threat of punishment is removed and those that become instead the basis of phobic reactions, motivating in turn new complexes of behavior.

I may have seemed to imply that it is only the behavior theorists whose treatment of motivation is inadequate. But of course physiological psychology, comparative psychology, and clinical

psychology all have their own inadequacies in this respect. All have failed to make clear what kind of answers we are seeking in the study of motivation.

Everyone's explanations have tended to attempt to reduce motives to something else. Almost no attempt has been made to study the unique properties of acts that are carried on for their own sake. Esthetics and play offer an almost infinitely fertile field for such investigation. What is satisfying about looking at something we call "beautiful"? What properties must the object have? What properties must the observer have? What other properties must be present in the situation? How could any part of the total be changed so as to make it discomforting instead of satisfying? Or take games and unorganized play. What are the properties that make a game or a hobby enjoyable? Clearly those properties are not entirely objective, since the game may be exciting to me and boring to you, or deeply satisfying to you and irritating to me. What kinds of interaction are involved? What dimensions of the person are important, and how do they relate to the structure of the objective situation?

Let me suggest a few examples of what I have in mind, taking my first examples from games. Most games involve built-in *difficulty*. It is no fun to move pieces across a chessboard without constraint or to fill up blanks in a crossword puzzle with any old letters that come into our heads. One of the things we seek from games is somehow related to the overcoming of obstacles or barriers or competition from an opponent. But "difficulty" is not a property of objects or situations; it is a property of interactions between objects or sets of objects and a person. The degree of difficulty depends on the person as well as the task. We must develop a technique for quantifying the degree of difficulty of a task that makes it attractive or gives it reinforcing properties, and the measure will clearly have to be one that involves personal parameters of some sort.

*Novelty* is another positive factor in games. Satiation, boredom, ennui result from sameness. A game that does not offer new situations does not hold one's attention or provide continuing satisfaction. But novelty is also "in the eye of the beholder" in some sense. What is new to me may be old to you. Or the newness may result only from a subtle change that you are bright enough



to detect while I miss what charms you. Or the reverse may occur. Your superior intelligence may lead you to notice that despite superficial variations, the game in question really offers only one or two basic problems endlessly repeated with perfectly predictable variations, and you may then find the game no longer appealing, while I remain enchanted with what I consider infinite novelty. We shall never be in a position to discover to what extent novelty is an important factor in human choosing until we discover how to define novelty as an interaction between a particular observer and a situation.

Suppose that a research program were to be undertaken along these lines. What other properties of motivational situations would we wish to investigate? If I suggest a few, I think you will find others springing to mind in large numbers.

For instance, in the same general category as novelty will be *change*, *unpredictability*, and *surprise*. The McGill studies on sensory deprivation and some early explorations of satiation in Lewin's laboratory suggest that the most discomforting of all conditions other than severe sensory pain may turn out to be lack of change. Prolonged periods with only a little change may be more than enough to counteract the initial attractiveness of any activity. I am here distinguishing change from novelty in the sense that church on Sunday is a change from the rest of the week though by no means a novelty; mere alternation between two perfectly familiar patterns may be a great deal more satisfying (or less discomforting) than complete lack of change. Experiments should be designed to explore this relationship.

*Unpredictability* seems to have charms of its own. It would be interesting to inquire whether church, for example, would be even more inviting if we never knew which day was going to be appointed church-going day or whether a job would be more attractive if our day off sometimes came on Thursday, sometimes on Monday, etc. without predictable pattern.

*Surprise* is still different. Surprise appears when the predictable does not occur. We make a prediction in confidence, and something goes awry. Some interesting quantitative problems arise here. How do we establish the kind of expectation that can be surprised? Must the expected event have invariably occurred in the past, or in what proportion of cases, and how often? Once the expectation is established, under what conditions of timing is

surprise attractive? For, though some surprises can surely be unattractive, there is considerable evidence of a homely kind that surprise as such, stripped of everything but the formal relation of an expected event that does not appear, is a "state that the organism will tend to prolong or repeat." Small children are delighted by any form of repeated behavior that is suddenly replaced by something else. Much of our humor is based on such a switch in the direction of thought: the humorist or clown leads you to expect one kind of idea or action and then hands you something else. It is funny, and it is fun. The fun lies partly in proper timing, and another interesting quantitative problem here presents itself. Both the "suddenness," or rate of exposure of the switch, and the properly dramatic moment for producing it are relationally determined. When we come to study them systematically, we must, of course, deal not with a simple measure like a number of seconds from part of the sequence to another but instead with a second—or higher—order relationship among time intervals. I am not proposing that the content of the surprise is without importance, but it is striking that proper timing can often change what seems to be inherently frightening or distasteful into something pleasurable.

Within the more general category of *difficulty*, already alluded to, we need to investigate the seemingly desirable qualities of barriers having certain properties. What follows is speculation, but careful observation should lead to specific hypotheses that are subject to empirical study. It appears to be true that barriers, in order to be enticing, must seem not to be insuperable but must nevertheless seem to offer a test and a challenge to one's self-esteem. No adult would spend much time jumping over a stick raised 2 feet off the ground, nor would he spend time trying to jump over one 10 feet up. But quite a few young men spend many afternoons trying to jump over ones between 4.5 and 7.5 feet high.

If you watch a small child involved in spontaneous play, you will recognize that so simple a matter as opening a door or turning a faucet on and off can be a source of interest and enjoyment so long as it is both new and a bit difficult. When it becomes too easy, it is abandoned; but we can also lead the child to abandon it by making it too hard. Lock the door, and the struggle with it soon ceases. Think how helpful it would be if we could uncover



the laws that operate on such ranges of difficulty. Sporting activities, college courses, professional problems, and social roles can all be made more or less attractive within limits by adjusting their difficulty. We know in a general way that they may be unattractive because they are too easy, offering no sense of achievement, or because they are too difficult, permitting either no achievement at all or too little to compete successfully with other activities. We must learn to identify optimum ranges of difficulty for different tasks. The problem will, of course, be a tough one, because the measures we need will have to take account of the abilities of the person himself and deal with information available to him about the task. Still, since the research problem is difficult but not insuperable, it should fall in an optimum range for someone and seem attractive to a psychologist or two.

Perhaps the same psychologists will also take up a closely related set of problems. The setting of personal goals seems to be enhanced by the opportunity to see a graded series of achievements. It would take a bolder theorist than I to assert that as a general law of human motivation, but I think we have the tools to find out whether or not it is one. The first step must be to learn how to measure the kind of graded goals that lead to choice behavior and how to distinguish them from ones that lead to avoidance. Let me illustrate. If I asked a 15-year-old boy to attempt to high jump 7 feet, he would almost certainly give up very soon. But if I let him start with a height that can be achieved and show him how practice and training can help him to inch his way upward over a period of years, I may be able to make a high jumper out of him. Or suppose I invite you to run for President. A realistic view of what that would mean were you to set out on your own would probably make the program unappealing. It would fall in the "too difficult" category. But the apparent degree of difficulty might change if I presented you with a series of stratagems leading to successive subgoals of precinct leader, city chairman, governor, etc.

Our knowledge in this area is slight, indeed, but we do have a few facts. Studies of levels of aspiration show that success typically leads to the setting of higher sights but that success also leads to more realistic goals than failure does. Apparently it is important to permit the aspirant to very distant goals an opportunity to avoid the cognitive

confusion that can be produced by failure. It is necessary not only for a properly graded series of steps to exist, but also for them to be apprehended. And that fact emphasizes the importance of recognizing the motivational differences that may exist between clearly presented situations and less clearly presented one, but also between people capable of understanding what lies ahead and those unable to do so. The attractive progression from subgoal to subgoal can occur only when it is cognitively available to the actor.

It may be valuable in this connection to note that in games we typically arrange things so that the direction of the paths to the goal is much clearer than it is likely to be in life's ordinary tasks. Even in a game like chess or bridge, where uncountable combinations of steps are available, the game provides strict constraints, and the shrewd player may know within reasonably narrow limits the probabilities of success on any one play. The dull player will probably find the same game confusing and, therefore, unattractive. It seems likely that the clarity of paths toward the goal is a part of the attractiveness of the entire enterprise. At least we may note that people who are skillful in handling human beings make regular use of this motivational principle (if it can be dignified with that title). The salesman or politician will typically attempt to diminish uncertainties for you with respect to the next step and where it will lead, while at the same time showing you the magnificent possibilities of the steps to come. Any theory of motivation will have to find room for an assessment of the clarity with which the path to the goal is delineated.

Earlier I spoke of the charms of uncertainty and surprise; now I am asking you to consider the attractiveness of a diminution of alternatives and a maximizing of clarity. There is really no contradiction. It is simply a fact of life that the attractiveness of most situations increases with uncertainty up to some recognizable point and then decreases. If we can learn to measure such things, we can discover empirically the optimum ranges of uncertainty just as I have proposed that we seek the optimum ranges of difficulty.

The observation of games and recreations, activities that are seemingly without extrinsic goals but are instead indulged in for their own attractive properties, suggests still another kind of pattern that seems to create attractiveness. That is the pattern of tension followed by release. The play-

ground roller coaster is a classic example. So is a horror movie. So is the game of hide-and-seek between parent and small child. So to some extent are skiing, mountain climbing, automobile racing, and others. I should certainly not maintain that any of these occupations has as its only charm the building up of fear or tendencies like fear only to find out that one comes out safely in the end. But the fact is that the tension release pattern appears over and over again throughout observations of human motivation, taking forms as various as the taking of snuff, the seeking of sexual arousal that it may then be dispelled, and the half-serious tales of women who buy shoes that are too tight because it feels so good to take them off. What we do not know, and what so desperately needs careful study, is the objective meaning of what we call tension. The word has been used by psychologists to refer to physical changes (as in muscle), to experiences (like anxiety), to conditions of the nervous system, and to purely formal constructs (as in the writings of Lewin). In general we tend to feel that these uses are not unrelated, that there is a kind of basic common sense to justify the same word's being assigned in the different contexts. But the common core, if any, has not been identified. And we should not continue trying to use the word for scientific purposes until it is. All the uses seem to have in common a reference to some kind of constriction of behavioral possibilities combined with a probability, increasing with time, that the constriction will be replaced by relatively diffuse and undirected expenditure of energy. Can we find a mathematical statement of those relationships that is adequate to enable us to try it for size on the various things called tension?

Another formal problem has to do with the rates at which tension is built up and released. It seems likely that the explosive relief of the sneeze is a very important part of the snuff-taker's pleasure and that if the nasal tickle merely faded slowly away, the point would be lost. Conversely, the fear and uncertainty of the roller-coaster- or horror-movie-type of thrill can sometimes be built up for so long that the fun is destroyed. Genuine problems of temporal patterning exist here, and I see no reason why they should not be amenable to experimental investigation.

We have made here only a small beginning. We have hardly scratched the surface of the things that

people do "for their own sake." The afternoon of a small child is a gold mine of suggestions for research on the structural properties of situations that motivate behavior. What are the structural properties of the task of taking apart and putting together a simple object that make it attractive? How could we make it more attractive, or less so? What are the *temporal* characteristics of that same task? How long can play continue before interest flags? After what might be likened to experimental extinction does take place, does spontaneous recovery occur? How soon? Under what conditions does permanent extinction occur?

We have tended to think of extinction only in terms of inhibition by a competing response or in terms of the weakening of a stimulus-response bond by punishment or by reactive inhibition. But the problem is bigger than that. Human beings do, after all, find that block piling and percolator dismantling permanently pall before adulthood. When I became a man, I put away childish things. What, psychologically speaking, are childish things?

Visitors from other cultures often strike us as childish because of their delight with what is new to them but old to us. Adults who "discover" a new art form go rapidly through stages of excitement followed by boredom with particular styles in the art until, as we say, their taste matures. Perhaps maturing taste means only that increasing opportunity to experience the various sensory relationships inherent in an art form leads to a gradual recognition of the difference between experiences that are, for some inherent structural reason, readily satiated and those that are not. As in games, *difficulty* may play a part in maintaining interest. Or sheer complexity may provide a sense of unending novelty and variety within a familiar framework. We do not know what is important here, but someone ought to be finding out. Experimental esthetics seems to hold little interest for the artist or art historian, but it may hold the key to many important motivational issues and should thus be of great interest to psychologists.

In fact, nowhere is the cognitive approach to motivation so clearly promising as in esthetics. Successive re-exposures to a work of art produce genuine cognitive changes that are in turn clearly related to changes in esthetic satisfaction and value. A work seen or heard for the sixth or sixtieth time comes to be more familiar, perhaps more orderly,

sometimes more complex as we begin to appreciate details that escaped us at first, and finally in at least some cases to be apprehended so differently from the first time that we genuinely have difficulty believing that we are dealing with the same work of art. These cognitive changes affect the degree of satisfaction or dissatisfaction that we have with the experience and determine whether or not we seek to experience that work again.

But to return to the matter of maturing taste and putting away childish things, it should be apparent that some kinds of experience do lose their charm after numerous exposures. If the process is a cognitive one, it would not be surprising that adults develop more rapidly than children and, if started at the same stage, run faster through the various delights that (for whatever reason) seem not to hold experienced human beings despite their early charm.

The problem gains added interest when we look at it from the point of view of the now classic problem of functional autonomy. Allport supplied us many years ago with numerous examples of human activities first engaged in as a way of reaching some more distant goal and later accepted as attractive in their own right. A typical example is that of the fisherman who first went to sea to earn a living but who now finds that the ocean exerts an irresistible pull when he no longer makes his living that way. Or consider the man who first learned to play the violin in order to win the favor of his parents and now, though parental favor is no longer an issue, seeks out the violin as his favorite relaxation. Why is it true that in both cases only part of the activity acquires motivational force? The fisherman has given up all the things he used to do on the boat as a commercial fisherman; he does not feel the need to cast nets and clean fish. The violinist has given up doing his homework before dinner, riding his bicycle to music lessons, and all the other things he used to do as part of the same activity. Our problem is to discover what factors select out the particular parts that become and remain intrinsically attractive. It is important that we investigate the properties of activities which drop out as well as the properties of the activities that remain.

The idea that one may "discover" in a genuinely cognitive sense the undesirability of a course of action that appeared superficially to be desirable is,

so far as I know, an unexplored one. But the cognitive approach might conceivably clear up the present mystery and confusion about the role of punishment. Let us, in a purely speculative way, consider the possibility that punishment produces three distinguishable results.

In one case, punishment may deter the attractive response. A child, knowing that he will have his hands slapped if he steals the cake, eyes it greedily from afar but does not touch it. Continued contemplation does not diminish the desirability of the forbidden object. Indeed, in some cases, deterrence may result in just such opportunity for contemplation as will bring out hitherto unforeseen attractions in the forbidden response.

In the second case, punishment having deterred the response itself, study and contemplation of the total situation may follow and have the opposite result. That is, a child punished for playing in the street may live to understand the situation as his parents understood it and thus find it no longer inviting. The punishment may serve primarily to focus attention on the problem and to provide a respite from the activity that was indulged in so automatically that suitable contemplation never occurred.

The third case, that in which a relatively strong response tendency seems to be permanently destroyed, may come about not through the discovery of unsuspected properties in the original situation, but more directly by the addition of punishment to that situation. Perhaps there, too, hypothetical answers can be proposed in terms of cognitive structure. At least two aspects deserve investigation. To what extent is punishment made to appear intrinsic to the situation? Touching a hot stove or walking into areas posted for dangerous radiation provides a deterrent very different psychologically from the intrinsic fear of detection and punishment by a policeman. If an activity can be made to appear *inherently* painful or destructive or sinful, that may in itself be sufficient to produce permanent withdrawal and distaste. Secondly, the structural characteristics of the punishment itself, already hinted at above, deserve the most careful investigation. To be scolded by Mother and to be scolded by Teacher are two different matters. Mother's scolding when angry is itself different from her scolding when she is apparently otherwise in a good mood. A punishment accepted as personal

rejection is different from mere retributive payment of a symmetrical kind such as blows or angry words exchanged by boys on a playground.

Obviously we do not have the theoretical tools for dealing with such differences in cognitive pattern, and we must begin to forge them. I have seemed to describe all motivation in terms free of self-reference, and many of you will be uneasy about the seeming disappearance of the self from the motivational stage. There is not time to develop the thesis fully, but I want to suggest that the self too is a cognition and that it appears as a single factor in relation to others in experience. The kinds of relationship between self and others or between self and objects that lead to particular kinds of action simply need the same kind of careful descriptive account that we need in dealing with other cognitive facts. "Self-realization," "self-esteem," and similar words describe cognitions. When we recognize certain kinds of failure or opportunity or threat involving ourselves we behave in particular ways. We must seek the regularities in such self-involved behavior as we would seek those in more objective situations.

To summarize: The sizes and shapes and colors of objects determine in part their attractiveness. Temporal patterns of stimulation may be pleasant or unpleasant. Invitations from persons in one social role produce a different response from those

in another. The clarity with which we grasp the details of a situation may affect our interest or lack of interest in dealing with it in a particular way. Complex matters of cognitive organization that can only be described crudely by words like novelty and difficulty and threat seem to play a critical part in the selection of playful activities. Choice of particular foods, particular mates, and particular vocations seems to depend on characteristics of patterns of sensory stimulation or relations between such patterns and memories or ideas. In short, the cognitive contribution to why we do what we do is an important one. It is also one that we know very little about. I have tried to present some suggestions for ways of looking at these problems, ways that might lead to empirical research of the kind we need so badly.

It is my hope that the establishment of lawful relationships among cognitive variables and patterns of choice may some day give us a genuine theory of motivation at a prephysiological level. I have no objection to physiology. In fact, I look forward to the day when we will have a physiological account of every behavioral fact or relationship, but the behavioral facts and relationships must come first. And we must not delay longer in finding out what kinds of psychological situation produce what kinds of behavior, writing first approximations to laws about the structure of such situations, and then beginning to seek the biological substrate.



*The following is a joint statement prepared by committees of the American Psychological Association, the American Educational Research Association, and the Department of Audio-Visual Instruction of the National Education Association. The statement has been approved by the governing boards of the associations represented.*

## SELF-INSTRUCTIONAL MATERIALS AND DEVICES

The use of self-instructional programed learning materials in teaching machines and similar devices represents a potential contribution of great importance to American education. But this contribution can be realized best only if users have information with which to evaluate self-instructional materials. Accordingly, the following interim guidelines have been prepared.

1. Teaching machines do not, in themselves, teach. Rather, the teaching is done by a program of instructional materials presented by the teaching machine. Any evaluation of a teaching machine thus requires an assessment of the availability and quality of programs for each type of machine, as well as its mechanical dependability.

2. A variety of programed materials is becoming available, but not all programs will fit all machines. Thus only those programs compatible with a particular machine can be considered as available for use with it. A list of commercially available programs and devices may be obtained (cost, 50¢) from: Department of Audio-Visual Instruction, National Education Association; 1201 Sixteenth Street, N.W.; Washington 6, D. C.

3. In evaluating the specific content which a self-instructional program purports to teach, the program can be examined to determine what the student is required to do and whether this reflects the kind of competence which the educator wishes to achieve. Like other educational materials, programs labeled with the name of a particular subject matter vary widely with respect to content and instructional objectives.

4. Just any set of question and answer material does not constitute a self-instructional program. One type of self-instructional material proceeds by small steps requiring frequent student responses.

These steps can be examined to see if they embody a careful, logical progression of the subject matter. Items in such a program are designed so that the student will respond to the critical aspects of each item or will perform the important operation which that item was meant to teach. Furthermore such programs generally provide a wide range of examples illustrating each principle or concept.

5. Self-instructional materials are designed to adapt to individual differences by allowing each student to proceed at his own rate. Some types of self-instructional programs further adapt by "branching" to alternate material. For this purpose, questions are designed to diagnose the student's needs, and to provide alternate material suited to these needs. The material is designed so that the choice of answer to a particular question determines which items will be presented next. Incorrect answers take the student to items containing information designed to correct the error before continuing through the sequence.

6. An important feature of almost all self-instructional materials is the record of the student's responses which provides a basis for revising the program. The prospective purchaser should ask about the extent to which revision has been based on student response and how the preliminary tryout was conducted.

7. The effectiveness of a self-instructional program can be assessed by finding out what students actually learn and remember from the program. The prospective purchaser should find out whether such data are available and for what kinds of students and under what conditions the data were obtained.

8. Active experimentation with self-instructional materials and devices in school systems is to be encouraged prior to large scale adoption.



Walter Van Dyke Bingham left with his will a memorandum suggesting that there be established, under the auspices of the American Psychological Association, an annual lectureship to call attention to the importance of the discovery and development of talented persons. His wishes have been carried out by Mrs. Walter Van Dyke Bingham in her continuing support of the "discovery of the talented" lectures, of which the following paper was the eighth. The selection of lecturers and arrangements for the series are responsibilities of the American Psychological Association. Previous lecturers and the institutions at which they spoke have been: LEWIS M. TERMAN, University of California, Berkeley, 1954; LOUIS L. THURSTONE, Columbia University, 1955; DONALD G. PATERSON, Ohio State University, 1956; CYRIL BURT, University of London, 1957; EDWARD K. STRONG, JR., University of Minnesota, 1958; J. P. GUILFORD, Stanford University, 1959; and DAEL WOLFLE, Columbia University, 1960.

The Walter Van Dyke Bingham Memorial Program on March 23, 1961 was held at Carnegie Institute of Technology. Bruce V. Moore described the early beginnings of industrial psychology under the department headship of Bingham. Leonard W. Ferguson presented a paper on the history of industrial psychology and the role it has played in working with the labor movement. Harold J. Leavitt presented a paper entitled "Toward Organizational Psychology." Mrs. Walter Van Dyke Bingham was introduced by Glen U. Cleeton. The program was concluded by the address of John M. Stalnaker.

## RECOGNIZING AND ENCOURAGING TALENT

JOHN M. STALNAKER

National Merit Scholarship Corporation, Evanston, Illinois

Walter V. Bingham was a name I learned early in my college career. L. L. Thurstone, my senior professor, knew Bingham well and spoke of him as a key person in developing psychology as an applied science. While it was during my student days that I met Bingham, read his publications, and heard him lecture, it was not until the second World War that I came to know him and to observe firsthand how effectively he could bring his abilities and knowledge to bear on the important issues of those turbulent days.

As the chief psychologist in the War Department, Walter V. Bingham was universally respected for his wisdom and experience. More than that, he succeeded where others failed. Working as a member of a committee on service personnel—selection and training—and on the Applied Psychology Panel of the National Defense Research Committee, I had many reasons to consult with Bingham and many occasions to work with him. From our association I learned much.

You will understand therefore my special pleasure in having this opportunity to present the Walter Van Dyke Bingham Memorial Lecture.

The purpose of this lecture series is "to call attention to the importance of the discovery and development of talented persons." Past lecturers have treated this subject chiefly from the theoretical point of view. This year I want to describe how the problem of discovering and encouraging talent on an extensive scale has actually been handled in one case.

THE National Merit Scholarship Program was created some 5 years ago as a means of arousing the public's awareness of and respect for intellectual talent and in this way to encourage the development of such talent. Ideally, a scholarship program will extend its influence far beyond the small group of students who are actually given scholarships. By helping to foster a climate

of opinion favorable to intellectual excellence, it will stimulate latent talent.

One of the popular themes of the day is the need to develop fully our human resources. There is no need to labor the point here, except to say that this need is the reason for the Merit Program. Suffice it to observe that the saying, "Knowledge is power," has never been more true than it is today,

and that knowledge has become so complex and extensive that more and higher education are almost absolute requisites for advancing our knowledge—and advance it we must on many fronts. Good minds are required even to keep up with the new developments today. Only the most talented minds will make new breakthroughs for us. Higher education is becoming a requirement, not only for individual fulfillment, but also for national survival in this day when man-made weapons are capable of destroying the world.

Moreover, the untrained and the uneducated have greater and greater difficulty in finding a useful place in the modern world. Whitehead's prophecy that there will be no appeal from the judgment which will be pronounced on the uneducated is about to become true.

As a nation we are slowly awakening to our responsibilities in education. To be sure, we have since our founding shown a certain dedication to universal education. In no major country in the world today is education more widely available than in the United States. There are colleges in every state and in every major city, and the number of these institutions is constantly increasing. Today, over half of our secondary school graduates enter college and the proportion is increasing each year.

But until recently we have not been concerned that our youth learn at as fast a pace as their ability permits the basic principles of those subjects without which life in the modern world is inconceivable. While paying lip service to the ideal of universal education, we have neglected our schools (and their teachers). We have asked that teachers instruct our children without demanding effort from the students. The quality of educational opportunity is poor in many places and the educational standards low. Universal availability of high quality education will provide a proving ground for all youth to show their ability.

Now we are faced with a serious international situation which threatens our very existence. The power which recognizes talent and develops it to the productive stage, quickly and in quantity, has the best chance of winning the race.

When the National Merit Scholarship Corporation was created in mid-1955, Sputnik I was not for another 2 years to arouse the American public to a new concern about the nature and quality of its education. The prevailing atmosphere in the

schools at that time was a peaceful calm. Adjustment and contentment were the goals. Schools were permissive, relatively noncompetitive, and paid little attention to standards of performance. There were no priorities in subject matter; courses were offered in home making, family living, cooking, and the like. Competition was de-emphasized. Every child should enjoy success. High school graduates were often not able to read or write at the level required for college work. As a result remedial courses were common in the colleges.

While there was much talk about talent, the temper of the people encouraged competition in the sports rather than the academic arena. Little league ball clubs could count on parental interest, financing, and guidance. As Elmo Roper has observed: "We have no folk tradition that seeks out and trains and sponsors and takes pride in exceptional intellectual talent. There are no little leagues of the mind."

What a nation respects and honors tends to prosper and grow. The star player on the winning basketball team can be assured of great public recognition and acclaim. The entire town will turn out to honor him. Newspapers will devote space to his amazing performance. The school itself may dismiss classes to celebrate the great victory. College scouts and "admission counselors" will visit him. Young children notice what is honored by adults, what adults judge to be important.

The serious, able youngster who devoted himself to scholarly work received no such public acclaim back in the days before 1955. His classmates regarded him as a "brain"—a term of opprobrium at that time—and ignored him. No public recognition stimulated him to greater effort. His juniors did not look up to him with envy in their hearts and a determination to follow in his footsteps.

The National Merit Scholarship Program was created to help to change this dismal, distorted picture. Could some of the elements of the contest be brought into the intellectual field? Conant in his *Citadel of Learning* remarked that the spirit of competition need not be deplored; it might under certain conditions be a healthy motivating force in the academic field. "Local enthusiasm," he said, "needs to be aroused for discovering and adequately educating those who are intellectually gifted."

The problem was to design a contest in the intellectual field suitable for students in the upper years of high school. Scholarships would be the incentive

—the motive power—and the program would have several important objectives.

First of all, the Merit Program would be a champion of able and talented youth. Most scholarship money is controlled by a relatively small number of colleges, who use it mostly for institutional promotion and development. Much of it is spent attracting the talented student from one college to another. The Merit Program, on the other hand, finds able students, wherever they may be, and helps them attend any college they select and study any curriculum of interest to them.

Another objective of the Merit Program would be to arouse public interest in intellectual talent. With the help of the secondary schools of the nation—all 25,000 of them—the Merit Program launched a dramatic campaign to find and publicize exceptionally able students. The top performers in such a national contest would receive notice in the local press, and thus the townspeople would become aware of that most precious of all their resources, talented local youngsters.

It was hoped that the Merit Program would be a mechanism to assure—to the extent of its resources—that no unusually talented student was denied a college education because of the economic status of his family. In addition to offering a substantial number of scholarships itself, the Merit Program notifies other scholarship agencies about the students it finds, thus helping exceptional students to obtain financial aid.

The Merit Program had as another objective the prevention of wasteful duplication. Any number of sponsors can utilize without cost the selection mechanism of the Merit Program to locate students having the particular characteristics of interest to them, so that they can support such students in their further education.

The Merit Program was aimed to help create a climate of opinion in which intellectual excellence would be respected and encouraged. "The United States has not achieved the tradition of respect for learning in all fields that is so much a part of the culture of other peoples," writes the Director of the National Science Foundation, Alan T. Waterman. "Above all, we must strive for a climate of opinion that will be favorable to our intellectual as well as creative activities."

Perhaps most important of all, the Merit Program, by gathering data on able students throughout the land, will contribute to our knowledge about

the location, background, and development of unusual intellectual talent. Research activities constitute an integral and basic part of the Merit Program operation.

These several hoped-for outcomes are broad as well as deep, and they will not be achieved easily or quickly. Many obstacles were anticipated.

Legally, the National Merit Scholarship Corporation is a nonprofit corporation in the State of Illinois. It restricts its activities to scholarship matters but within that field it handles all phases. An independent corporation not responsible to any other organization or group, it is controlled by a board of 22 Directors drawn from the fields of business, higher education, and secondary education. The board creates the basic policies of the corporation and oversees its general operations.

In addition to this board, there is an advisory council which recommends to the corporation's President procedures which will have the greatest educational values. There is also a research advisory board which reviews research activities and recommends new directions for research.

Conducting a national talent search, informing business organizations and others about how they can help to advance the program (i.e., raising money), selecting able students, aiding them to finance their education, and following them through their college career require a well-trained staff and a considerable budget.

When the National Merit Scholarship Corporation was established in 1955, the administrative costs of the program had been underwritten for the following 15 years, and at least \$1,000,000 had been made available for scholarships each year for the first 10 years. The total amount of money pledged by the Ford Foundation as a part of its broad program for assisting in the development and improvement of formal education was \$20,000,000. The Carnegie Corporation of New York also agreed to advance \$500,000 for administering the program during its first 5 years of operation; it has given an additional \$250,000 to finance research during the second 5 years.

Business organizations were immediately invited to finance additional scholarships. The number of sponsors has increased year by year; by 1961 some 135 different sponsors will be offering a total of over 525 sponsored Merit Scholarships at an estimated cost to them of \$2,500,000. This is in addition to the scholarships awarded by the corpo-

ration out of its resources provided through the founding grants.

The scholarship competition is conducted in this way: At the beginning of the school year all secondary schools in the United States and its territories are invited to participate in the National Merit Scholarship Program. Participation is by school, not by individual student.

In 1960 some 15,000 schools took part in the Merit Program. There are in the United States approximately 25,000 secondary schools, but one must remember that less than one-tenth of these schools enroll over half of all students in secondary education. It is estimated that the schools which took part in the Merit Program in 1960 enroll 85% or more of all of the secondary school students in the country.

The school itself selects those of its students who will participate in the first stage of the program, a preliminary selecting test. In some schools a small number are invited to participate; in others the preliminary test is given to the entire class of third year students. Approximately 600,000 students, or about one-third of all the third year students in high school, took part in the program this past year.

The selecting test measures both the aptitude and the attainment of the student. The test is 44 pages in length and requires 3 hours for its administration. The mere act of taking the test is itself of definite educational value to the student, since it gives him the benefit of a concentrated experience in dealing with difficult intellectual tasks.

The test measures in a relatively direct fashion the complex skills required for successful work in virtually any college; it is a test of a student's readiness for high level college work. Since the skills it measures are taught in all secondary schools, the test does not favor any particular high school curriculum. Nor is the content of the test such that the student can raise his grade by frantic last-minute study; it covers too much ground for such an effort to be successful.

The scores are reported to the students by the schools. They can then be used, in conjunction with interpretative material which has been supplied to the schools, as an aid in counseling students about their future academic plans and adult careers. So no one loses by taking part in the Merit Program; there is some value for everyone.

There is considerable debate in our secondary schools about the relative importance of aptitude and achievement. Aptitude, it is supposed, is a characteristic one is born with; the schools are in no way responsible for the aptitudes of their pupils. If a person is low in intelligence or aptitude, nothing can be done for him. But achievement is a different story. Here the schools have some responsibility. The student's achievement depends upon his applying his aptitude to a specific field of endeavor. It is obvious that no one is born educated; no matter how high his intelligence is, he can learn only to the extent that he applies himself. With equal effort the very bright student will learn more than the dull student; but if the person of lesser aptitude works more diligently than the individual with greater intelligence, he may indeed climb higher than his brighter associate who has less ambition and drive.

We psychologists are largely responsible for the overemphasis which the public gives to the IQ. Frankly, the IQ is overrated. Unfortunately, parents and even many teachers regard the IQ as an infallible and crucially significant index. As a result, they ignore the importance of the many other characteristics which contribute to attainment. In the final analysis it is not how bright one is, but what one has accomplished that counts. The IQ is an empirically determined index which has certain practical values when used with appropriate caution. However, it lacks a rigorous theoretical foundation. Actually it is a composite of a number of measures of different abilities. Ability is a many-sided affair, as Dael Wolfe pointed out in the Walter V. Bingham Memorial Lecture given a year ago, and any one person may be much better at some things than at others. The IQ represents an averaging of these abilities, and so it smooths over important peaks and valleys.

The gravest danger of the IQ, however, is that it gives a grossly oversimplified picture of the organization of the mind and encourages parents, teachers, and even the students themselves to underestimate the role of effort. The relationship between the IQ and productivity, even in scholarly fields, is not as high as is generally believed.

The pupil, the teacher, and the parent should put less faith in IQ. Motivation, ambition, the ability to direct one's efforts toward a specific goal, sheer energy level, if there is such a trait—these are the characteristics which, though they are



difficult to measure, determine achievement. The burning desire to excel, to be first, to be best can wisely be traded for a dozen IQ points any day.

In every aspect of life it is what one accomplishes that counts, not what his unused intelligence is, or what he might have done under other circumstances. In the Merit Program the effort of the student is considered, and all students are encouraged to apply themselves to attain greater heights in the intellectual realm.

The screening test in the Merit Program is handled by a recognized testing agency, Science Research Associates. The National Merit Scholarship Corporation does not prepare tests, sell tests, or derive any money from test sales. The corporation does specify the nature of the test it wishes and the conditions that the contractor must meet in supplying the test. To meet the heavy costs of testing, each participant pays a fee of \$1.00 directly to the testing agency. If a student is unable to pay this fee, the National Merit Scholarship Corporation pays it for him.

On the basis of this screening test, a group of 35,000 students is given some type of recognition each year. Though 35,000 is a large group, it represents less than 3% of the annual crop of high school graduates. In order to have students representative of every section of the United States, the top scoring students, the Semifinalists, are chosen separately for each state. In the United States, it is the state which establishes educational policies and procedures, and consequently states differ in their educational facilities and methods. It is assumed that if we select the very best from each state, the result will be a group of superior quality, with each state contributing its proper share. Geographic representation contributes to the vitality of any national program.

Of the 35,000 students who are given recognition each year, about 10,000 are named Semifinalists. They constitute the top group, with the more populous states having more representatives and the less populous states having fewer, just as in the lower house in our Congress. California, for example, has over 750 Semifinalists while Nevada has under 15.

In addition to the Semifinalists, who constitute less than 1% of the high school graduates, a second group is selected. The 25,000 students in this group are sent Letters of Commendation encouraging them to continue with their education. The

number of commended students in each state varies according to the proportion scoring high on the test nationally, without regard to the state-by-state selection of the Semifinalists. In New York, for example, in 1960 there were almost 5,000 Letters of Commendation awarded, while in three of our states, fewer than 25 students won this honor.

The Letters of Commendation were introduced in the third year of the Merit Program. At that time some skepticism was expressed as to the value of a form of recognition which is not accompanied by any financial aid. However, the results of our preliminary studies indicate that such recognition has a stimulating influence on able students. It gives them more self-confidence, it encourages them to apply themselves, and it causes them to set somewhat higher intellectual goals in life. Public recognition by itself can have a beneficial effect. When properly handled, simple means can be effective in encouraging talent.

After the 10,000 Semifinalists have been selected, they are asked to take a second test, the Scholastic Aptitude Test of the College Board. Each Semifinalist is also requested to supply certain information about himself and to have his school submit his academic record and its recommendation. Virtually all of the Semifinalists, over 97%, meet these requirements and confirm their earlier test scores. They thereby become Finalists in the program, and are eligible to receive a Merit Scholarship.

Unfortunately there is not enough money available to award a Merit Scholarship to every Finalist. The field must be narrowed even further. The recipients of the National Merit Scholarships (un-sponsored scholarships made possible by the founding grants) are chosen by a committee of people skilled in exercising the kind of judgment required. This committee meets to review the list of Finalists and, on the basis of the school's recommendations, the student's test scores, academic record, and outside activities and work, to select those students from each state whom they believe to be the most highly qualified. The number of scholarships awarded in each state is roughly proportional to the high school graduates in that state in the most recent year for which statistics are available.

In addition to the unsponsored National Merit Scholarships, the corporation distributes scholarships sponsored by corporations, foundations, and individuals. Many of these sponsors leave the



selection of the winners of their scholarships to the same committee which selects the winners of National Merit Scholarships. However, a sponsor may, if he wishes to do so, choose from among the Finalist group (all of whom have proved themselves to be academically qualified) those students who meet their special interests. For example, some sponsors prefer students who have an interest in science; while some prefer students residing in certain geographic areas. Many sponsors are interested in helping to finance the education of any employees' children who achieve the high status of Finalist in the Merit Program.

The secondary schools are sent complete reports on every phase of the Merit Program. In addition, the Semifinalists are listed in a book which is distributed to all colleges and other scholarship granting agencies. Partly as a result of this distribution of names, these students receive many additional scholarship offers. About half of the Semifinalists receive either a Merit Scholarship or some other offer of financial aid.

When the students take the initial selecting test, they are asked to name the two colleges they would prefer to attend. Each college is sent a list of the students who have named that particular institution with the students' scores on the screening test. As a result, each student on the list is likely to be given greater consideration by the college for admission or financial aid than he otherwise might.

The Merit Finalists are selected without regard to their financial need. The selection is based on ability only. Thus the student selected for a Merit Scholarship may be one whose family is able to support him in college, or he may be one who needs outside help in financing his college career. On the basis of this information the amount of money to accompany the scholarship is determined. The amount depends upon the family's ability to support the student at the college of his choice.

In determining the extent of a student's need two factors are considered. The first is the amount of money the family can be expected to contribute, and the second is the cost of attending the college selected by the student. The individual stipends range from a minimum of \$100 a year to a maximum of \$1,500 a year. Each scholarship covers 4 years of college, assuming that the winner progresses at a normal rate and does satisfactory work.

The need factor is re-evaluated each year. If it is found that the ability of the family to support

the student has changed, a new stipend is set. For example, the need of one student, the son of a business executive, was assessed at \$100 a year at the time he won his scholarship. During the student's freshman year in college his father suffered a fatal heart attack. The Scholar's situation was then re-evaluated and his stipend was changed from the minimum to the maximum of \$1,500 a year. In a sense, a Merit Scholarship is an insurance policy.

About a third of the Merit Scholars currently receive an annual stipend of \$250 or less. At the other extreme, about 20% receive the maximum stipend of \$1,500. At the present time, the average stipend is around \$827 a year. Even when the amount received is only \$250 or \$300 a year, it can make the difference between the student's attending the college of his choice and his going to an institution which he believes to be less satisfactory. The Merit Scholarship money therefore is of major significance to most of the students.

In addition to the stipend paid to the Merit Scholar, each scholarship is accompanied by a grant to the college to be used in whatever way the college wishes. The purpose of this grant is to call public attention to the importance of assisting privately supported colleges. In 1959-60 over \$750,000 was paid to the colleges. During the same year, payments to the students amounted to over \$2,200,000.

Obviously, the Merit Scholar has been selected with great care from among hundreds of thousands of participants, and he is an interesting—sometimes an exciting—young person. He has scored in the top fraction, about 1%, of the high school seniors in his state. His high school academic record and recommendations are superior. His activities outside the classroom testify that he is a person of some breadth. He has been chosen as representative of the most intellectually promising of the younger generation.

In selecting scholarship winners, no consideration is given to the student's family background or social and economic status, nor is his being from the city or the country taken into account. The task is to select the most promising young people without regard to their financial need. After this has been done it is possible—as a part of the research activity, not the scholarship program as such—to check into parental occupations. As might be ex-

pected, many of the winners have parents who are well educated; the father is a physician, a lawyer, a teacher, or an executive. The interesting fact, however, is that many of the parents have more ordinary occupations.

Among the parents of the group awarded Merit Scholarships in 1959, we find barbers, bookkeepers, butchers, cab drivers, carpenters, cashiers, chauffeurs, clerks, construction workers, electricians, farmers, firemen, glass workers, junk collectors, mail carriers, mechanics, and painters. Of course some of the fathers are accountants, attorneys, business executives, clergymen, college administrators, editors, economists, physicians, and teachers. Clearly, ability is where you find it; one cannot tell from a parent's occupation or social and economic background whether or not the child will have unusual mental ability. That is why equality of educational opportunity is prized in a democracy.

The personalities of Merit Scholars are of particular interest. The public usually thinks of the very bright young student as a rather peculiar, introverted type—smaller in physique than the average, somewhat antisocial, and rather narrow in his interests.

But this image is a false one. The brainy can be brawny too. Research has shown that gifted young people are generally taller, heavier, and physically and mentally healthier than those of average intelligence. From studies of Merit Scholars we know that they have a tendency to be dominant in social situations, or more accurately, not to be submissive. They have a greater interest in people, less tendency to withdraw from social situations, and more sophistication and self-confidence than the average person. They are less tense, less anxious, less given to feelings of insecurity or depression. They show unusual originality, imagination, and resourcefulness. Most important, perhaps, researchers have characterized the Merit Scholars as "risk-takers in the field of ideas."

Where do these Scholars choose to go to college? There are well over a thousand 4-year, degree granting colleges in the United States. Since the Merit Scholars are selected from every state in the Union, it might be expected that they would spread themselves among the colleges more or less evenly. But quite the contrary is the case. A relatively small number of colleges are chosen by this high quality group of students. In the school year 1960-61, Merit Scholars are attending some four hundred

different colleges and universities. One institution alone, Harvard College, has attracted almost 10% of the Merit Scholars. The 12 colleges most popular with this group attract about a third of the Merit Scholars. These are, in order: Harvard, Massachusetts Institute of Technology, Stanford, Radcliffe, Princeton, California Institute of Technology, Yale, Rice, University of Michigan, Oberlin, Swarthmore, and Cornell.

In March 1960, the 34,000 highest scoring students (who were then juniors in high school) were asked to name the one college they most wanted to attend. If any bias enters this poll, it is unknown. In this popularity contest, in which only the very brightest students have a vote, we again find a marked preference for a small number of institutions. Over one-third of these very able young men wished to attend the following colleges in the order named: Massachusetts Institute of Technology, Harvard, California Institute of Technology, Stanford, Princeton, Cornell, Yale, University of California at Berkeley, Notre Dame, and University of Michigan. Approximately one-fifth of the girls named as their first choice the following 10 institutions (listed in order of their popularity): Radcliffe, Stanford, Cornell, Wellesley, University of Michigan, University of California at Berkeley, Oberlin, Smith, Swarthmore, and Northwestern.

If we consider the number of these able students who named a particular college as a percentage of the number of students that institution admits, we get a different rank order. For the male students, California Institute of Technology was named by somewhat over four times the number of students it admits into its entering class. Next in order is Massachusetts Institute of Technology named by almost twice the number of students it admits in its freshman class. Following these two institutions come in order: Harvard, Rice, Amherst, Swarthmore, Reed, Stanford, Princeton, University of Chicago, Oberlin, Yale, Columbia, Dartmouth, Carleton, and Wesleyan University—all attracting from this very select group a vote equal to 30% or more of its entering class. If we consider the girls and rank the colleges according to their popularity with this superior group, but relative to the size of the incoming freshman class, we get this order: Swarthmore, Radcliffe, Middlebury, Rice, Stanford, Reed, Oberlin, Cornell, Carleton, Wellesley, Bryn Mawr, Smith, University of Chicago, Barnard, and Mount Holyoke.

These figures may not have any great significance. Because a student named a college as his preference, it does not necessarily follow that he is equipped intellectually, socially, or financially to attend that college, or that he would be accepted by it. We need a good deal more information before we can adequately interpret this popular vote. However, the public's interest in such polls suggests that they are worthy of some consideration. No popularity contest should be allowed to obscure the difficult problem of matching a particular student with the institution which will bring about his maximum development. In the high school-college guidance work to date too frequently the blind have been leading the blind.

One problem encountered by the Merit Program is the tendency of the public and the press to use the results of the program as an index of the value of a particular school or college. The public is apt to conclude quite erroneously that the colleges which are most popular with Merit Scholars are the best colleges for all students. Likewise, secondary schools having a large number of Finalists in the Merit Program are sometimes said to be "better" than other schools having a smaller number of Finalists. But the quality or effectiveness of a school cannot properly be judged by the number of its students who win awards in the Merit Program. All selections are made on an individual basis. The distribution of the population throughout a state, the size of a school, the native intelligence of its top students, the nature of the community where the school is located, and many other factors having nothing to do with the total effectiveness of a school can influence its number of award winners. Although it is recognized that award winners bring honor to their schools and their parents as well as to themselves, the press and the public are encouraged to judge each student individually and to refrain from comparisons of schools and colleges.

What has been the college record of Merit Scholars? The first class of Merit Scholars entered college in the fall of 1956. This initial group numbered 555, 402 (72%) of them boys and 153 (28%) girls. Of the first group, 88% of the girls and 81% of the boys have now graduated.

The outstanding record made by those who have graduated is striking. Over 60% stood in the top 10% of their class; a fifth of the group was in the top 1%. About 80% graduated with some

academic honor. A number led their class—like the charming young woman who selected a college of mining and ranked first in her class, composed mainly of men, every 1 of the 4 years, graduating with high honors and incidentally gaining a husband in the process. Both are now in graduate school.

Their records in campus leadership were also outstanding. About 1 in 5 held leadership positions. Many Merit Scholars were editors of major campus publications and presidents of major student government organizations and living groups, and 20 won their letters in varsity sports.

Of these graduates, 18% of the boys and 37% of the girls have married. Slightly over 10% of the original group are still in college, because they are taking 5-year programs or because they took a year out for some reason. It is anticipated that approximately 94% of the original group will receive college degrees within 5 years after entering college.

Up to the present time slightly over 6% of this first group have left the program for one reason or another. Only 17 Merit Scholars had their scholarships terminated because of unsatisfactory work in colleges of their choice, and more than half of these students are back in college today. Fifteen Merit Scholars—eight girls and seven boys—withdrawed from college while in good academic standing. Most of the girls withdrew in order to marry, and of these the majority expect to complete their degree requirements eventually.

Most of the first group of Merit Scholars are continuing their formal education beyond the bachelor's degree. Over 80% of the men and almost 60% of the women in this group plan to go on to graduate or professional schools. Eighty percent of them hold fellowships and assistantships, about half from sources outside the college or university.

The Merit Scholars obviously are a distinguished group. But what of those Finalists who did not win scholarships? We have found that over 94% go on to college. About one-half of the group are receiving some type of scholarship aid and we believe we have helped them to do so.

Of the boys who took the screening test and who ranked in the top third of all juniors in the country, about 87% are now full-time students in some college. The same is true of about 77% of the girls. Many of these students have received some scholarship help, and research shows that the higher an individual's test score, the greater the probability that he holds a scholarship.



In a recent study, one of the research staff members examined the nature of academic achievement and creative behavior in the Finalists. He finds support for the idea that the creative person (as opposed to the academic achiever) is one who is independent, intellectual, expressive, asocial, and consciously original. The mothers of creative persons are permissive and ready to accept the ideas and impulses of the young, while their fathers want them to be curious and self-reliant.

Preliminary research results suggest that these creative people are not favored by the groups who select scholarship winners. At present there are no adequate measures of potential creativity, although researchers at Merit and other places are beginning to make progress on this problem.

John Holland, Director of Research for the National Merit Scholarship Program, has written:

It is imperative that we learn how to identify the creative person so that we can seek out and encourage such students, whatever their application form debits. They should not be penalized for their failure to play the good boy role for their high school teachers, or to satisfy the pointless demand for well-roundedness by dissipating their energies in a frenetic round of extracurricular activities and good works.

This year the Merit Program is testing some preliminary notions about creativity by selecting a small group of students from its Finalists who appear to be particularly creative.

Has the Merit Program succeeded in encouraging the recognition and development of talent? Measurement of impacts of an attack on such a broad front is difficult; we must allow more time for the dust to settle before we can take sightings. The first class of Merit Scholars is just getting under way in graduate school.

The letters of comment which reach us are overwhelmingly favorable. One official from a small college comments on the leavening effect of its six Merit Scholars:

It is difficult to estimate the impact which these six students are having on the campus, but beyond all doubt it is terrific.

States a college president:

The program has been successful in influencing the junior and senior high school students to approach their academic programs with seriousness of purpose which was not common a few years ago.

The chancellor of the Telluride Association, who visits many schools each year, attributes much of the high school student's changed attitude toward academic work to the influence of the Merit Program. He goes on to say:

It is getting so a man may be a first-class scholar in a high school today and not lose social caste.

A high school principal writes:

The Merit Program is making a critical contribution to educational thought . . . the most wonderful thing about your work is that its influence will be everlasting, for it affects profoundly the lives of boys and girls.

From the students themselves we occasionally receive some heart-warming letters. For example, a young lady from Indiana writes:

Your program was no small factor in causing me to go to college. You see I am the first person in my family who ever indicated a desire to attend college. My parents did not even attend high school. As a result, it was not easy to convince myself and my family that college was for me. However, when I won a Certificate of Merit I was convinced I should go to college, and it helped me to win my parents over to my view.

The press's coverage of the Merit Program, increasing each year, gives evidence of the public's growing interest. Among the clippings which arrived this month was a letter to an Illinois newspaper from one of the recently graduated Merit Scholars. He says in part:

The most significant effect of the National Merit Program is not conservation or insurance, but stimulation. National Merit winners and Finalists acquire recognition and self-realization that (1) prompts those to go to college who might not have done so otherwise, whether they received a scholarship or not; (2) encourages them to go to colleges where there is a keener competition and a greater exchange of ideas; (3) produces an incentive to work commensurate with ability. This stimulation is not a short-lived thing; it builds upon itself. The high percentage of Merit Scholars who have gone into graduate study is some evidence of this. In my own case I believe that I can say that my desire for worthwhile achievement is at present stronger than it ever was.

Evidence by testimonial, however interesting, is not convincing to the scientist. After an additional several years have gone by, an attempt will be made to obtain more accurate estimates of the impact of the Merit Program.

Because the data on talented students which have been collected are of an unparalleled quality and magnitude, the research activities of the Merit Pro-

gram are particularly important and promising. Much of our research is directed toward developing new methods of scholarship selection. Heretofore, the very success of the objective scholastic aptitude and college readiness tests has discouraged experimentation with measures of other significant characteristics. It might be valuable, for example, to study such background factors as the family, the community, and the friends of able students, to ask what cultural elements in the student's background contribute to develop his talent to a productive level. The student's scholarly activity independent of classroom work may also be of greater significance than has been suspected previously.

It is difficult to assess the significance of personal characteristics not measured by the widely used scholarship selection tests, but more thorough measurement in this area may prove to be important in the identification of able persons who will be productive after college.

The Merit Program is conducting research in several other areas. The results of its research are being reported in the professional journals and through technical progress reports. This research activity, a fundamental part of the Merit Program, contributes to the health of the entire program and prevents any of the procedures from becoming frozen.

In many ways the Merit Program is a pilot venture, making explorations in an important but very complex field. By working with schools throughout the entire land, with their ablest pupils, and with the colleges which attract such students, the Merit Program gains experience in recognizing and encouraging talent. We are establishing a few guideposts and a few warning signs.

Consider an example. Talent loss is a concept which we are working to define more meaningfully. For the moment we will take it to refer to those students who are capable of doing superior college work but do not go to college. Many of these students, most of whom are girls, come from lower socioeconomic levels and from areas where college attendance is unusual. Apart from financial need, lack of motivation is the primary cause of their not

going on to college. If we are to prevent this talent loss—and prevent it we must—we must identify these students in the seventh or eighth grade, perhaps even earlier.

Such talented young pupils should be introduced early in their lives to the world of ideas, to books, to scientific laboratories, and to the fun of learning. When optional routes are offered in high school, they should be guided down the path of heavy intellectual activity. Only in this way will they be both motivated and prepared to compete in the latter years of high school; only in this way can they win their share of financial help for college. Early stimulation, followed by superior educational opportunities, is the key.

Of the many things we have learned in operating the Merit Program for 5 years, the most significant is how little we know about identifying creative talent, and how much less about its proper development. The extensive folklore about able students and scholarships must be challenged, if more effective procedures are to be developed. Every sizeable scholarship program should have a companion research program to find out what effect it is having, and how it can do the job better.

To discover talent we must initiate bold new methods based on sound theory and applied with imagination and practical ingenuity. Private ventures, like the Merit Program, should not be afraid to experiment, to attempt new approaches, to venture beyond established practices.

The Merit Program will continue to experiment and to learn. It will continue to encourage the public to honor intellectual excellence, to excite each community about its own able youth, to make higher education a possible goal for many students of demonstrated promise, and to create a climate favorable to intellectual excellence. It is an action program dedicated to recognizing and encouraging talent, goals which many years ago Bingham knew were among the most important ones toward which citizens of a democracy must strive. In the words of John Gardner: "... an undiscovered talent, a wasted skill, a misapplied ability is a threat to the capacity of a free people to survive."



## ROLE SATISFACTION OF PSYCHOLOGISTS IN STATE HOSPITALS

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THERE exists considerable disagreement both within and without the profession as to the desirable role of the clinical psychologist. His traditional role in the psychiatric setting has been that of a mental tester or psychometrician, and this is still regarded by most medical administrators as his "bread and butter" function. However, many psychologists seem to regard the performance of evaluations as a necessary evil—the price exacted for being allowed to engage in more esteemed activities. The most frequently expressed reason for this resistance is that medical staff appears interested only in reaching agreement on a diagnostic label, with little interest in the patients' personality dynamics and their implication for treatment planning. With this perception, it is difficult for psychologists to generate enthusiasm over the time consuming conduct of "psychological autopsies."

The high preference activity of the clinical psychologist is the performance of individual and group psychotherapy. Since the second World War, this has been an accepted role so long as he functioned in a psychiatric hospital under (nominal) medical supervision. Influenced by an initial enthusiasm, the neophyte clinician only belatedly discovered that he has been inadequately trained for this responsibility. This highlights a basic dilemma of graduate departments of psychology: should they train professional practitioners or teacher-researchers? The experimentally oriented academicians who dominate most departments quite naturally undertake to produce graduates in their own image. Unfortunately this often results in a disturbing discrepancy between the content of course curriculum and the requirements of adequate functioning in the practicum situation.

The third and "unique" function of psychologists is research. Clinicians as a group, however, are help oriented rather than inclined towards research and as a result they are often resistant to acquiring the prerequisite skills in graduate school and

are nonproductive researchwise after graduation. Nevertheless, because of the emphasis in graduate school, they are conditioned to experience continuing guilt over their lack of research productivity (to some extent rationalized on the basis of "excessive service demands"). It is unfortunate that the average clinician is not a more skilled researcher, since this role might allow him a legitimate escape from some of the frustrations associated with his other functions. It is against this background of the clinical psychologist's troubled search for a professional identity that this study was initiated.

The study was concerned specifically with an attempt to identify those variables which highly influence the role satisfaction of clinical psychologists employed in state psychiatric hospitals. The motility of clinical psychologists in general and institutional psychologists in particular, poses for hospital administrators the difficult problem of recruiting qualified personnel who will remain in the setting a sufficient length of time to lend stability to any comprehensive treatment, training, or research program. Various relationships between factors of job satisfaction and job tenure having implications for recruitment were investigated.

In some ways the present study is an elaboration of the report by Jacobsen, Rettig, and Pasamanick (1959), whose main interest was the relationship of status to job satisfaction for a half-dozen mental health professions in the state of Ohio. Their main relevant conclusion was that the association of abnormal behavior and the social rejection of hospitalized mental patients generalizes to all employees, and subsequently affects the lowered status and satisfaction of institutional psychologists as compared to their noninstitutional colleagues. Demonstrated differences between these two groups of psychologists suggested the possibility of isolating selection criteria which would enable recruitment of psychologists who would find relatively greater satisfaction in state hospital employment.

## METHOD

All midwestern, state employed, institutional psychologists listed in the 1960 APA *Directory* ( $N = 131$ ) were requested to return an anonymous questionnaire.<sup>1</sup> Seventy-one persons responded from the nine states included. Of this group, 16 designated themselves as chief psychologists and 41 stated they possessed a master's degree or less. The magnitude of the problem under study was partially reflected by a comparison of listings in the 1960 and 1956 *Directories*; only 18% of the names were identical.

Three objective rating schedules constituted the main measurement techniques within the questionnaire:

1. The first designated various categories of professional activity: psychological evaluations, individual psychotherapy, group psychotherapy, supervision and training, administration, and research. Respondents were asked to state the degree of satisfaction experienced and the percentage of their time devoted to each activity. The percentage of time and degree of satisfaction for each activity were then weighted, allotting larger scores when a high percentage of time was spent in a rewarding activity.<sup>2</sup> A single, cumulative Satisfaction Index for each individual, and a total Satisfaction Score for each activity (summed across individuals) were derived.

2. Respondents were asked on a second scale to rate both their "actual" and "abstract" (idealized) satisfaction on a variety of factors, other than activity, believed to be intimately related to job satisfaction: intellectual stimulation, salary, status and prestige, working conditions, security, professional freedom, patient progress, type of patient seen, manageability of workload, accord with hospital program objectives, and opportunities for advancement. The analysis included computation of a single Discrepancy Score for each individual.<sup>3</sup>

<sup>1</sup> A copy of the questionnaire has been deposited with the American Documentation Institute. Order Document No. 6763 from ADI Auxiliary Publications Project, Photoduplication Service, Library of Congress; Washington 25, D. C., remitting in advance \$1.25 for microfilm or \$1.25 for photocopies. Make checks payable to: Chief, Photoduplication Service, Library of Congress.

<sup>2</sup> The various degrees of rated satisfaction were given values from 1 (for "low") through 4 (for "high"). Numerical values were also assigned for the "percentage of total time," one credit being given for each 7.5% unit of time. The product of the two assigned values was the index used as the objective measure of satisfaction.

<sup>3</sup> The same four-step scale ranging from "low" to "high" was used here, with again weights of 1 through 4, respectively. The Discrepancy Score was an algebraic subtraction of abstract minus actual satisfaction levels—algebraic, to allow for the use of negative members in the largely hypothetical instances where the actual satisfaction was greater than the abstract.

3. A third scale measured the respondents' degree of interprofessional satisfaction in their hospital setting, towards: attendants; occupational, educational, music, and recreational therapists; physicians; social workers; nurses; and the administration. A composite score for each individual was calculated.

Hereafter these will be referred to as the PA, AA, and IP scales, respectively.

In addition to these scales, respondents were asked to make gross ratings of the orientation of their facilities on two four-step continua: the first defined at the extremes by the terms "organic" and "psychological," and the second by "treatment" and "custodial." Two open-ended questions also invited expressions of satisfaction and frustration in the work situation, while a final question inquired into the "most significant changes" in the psychologist's role at the facility in the past 18 months. The questionnaire also requested biographical information for classification purposes.

## RESULTS

The complementary nature of the PA and AA scales is reflected in a high intercorrelation ( $r = .42$ ,  $p < .001$ ); that is, as the PA Satisfaction Index increases, the degree of discrepancy between actual and ideal profiles decreases. The AA scale clearly indicated that as years of state employment increases, the actual satisfaction and abstract expectation levels both rise, though the latter accelerates more rapidly, resulting in an increased discrepancy between them. There was also support on the PA scale for the generalization that percentage of satisfaction is greater for those individuals employed longer. This trend was not entirely attributable to the finding that chief psychologists, an older age group, report a significantly higher level of satisfaction (and a lower discrepancy) than do their staff psychologists ( $p < .01$ ). A related observation was that master's level psychologists tend to respond with a somewhat greater job satisfaction than do PhD staff members ( $p < .05$ ).

The correlation between discrepancy on the AA scale and interdisciplinary relations (IP scale) for all psychologists was .43 ( $p < .001$ ); that is, as the discrepancy between actual and abstract satisfaction increases, the degree of cordiality with members of other services deteriorates. The group perceived interprofessional relations with physicians as definitely most strained, and relations with occu-

pational and other such therapists as most congenial. There were no significant differences between master's and doctoral staff level psychologists in these rankings. Neither do chief psychologists differ significantly with their staffs, although they rate their relations with the administration as somewhat more positive.

Psychologists who reported working in institutions with a frankly organic orientation express a lesser percentage of satisfaction on the PA scale than do psychologists reporting a psychologic orientation ( $p < .02$ ); those who rated their institutions as somewhat organic were even more dissatisfied ( $p < .01$ ). The difference between somewhat organic respondents and those in the somewhat psychologic group was consistent but nonsignificant (on the AA scale differences on the Discrepancy Score were significant for these intermediate groups at the .05 level and at the .10 level for the extreme groups). Satisfaction scores on the custodial-treatment continuum did not differ significantly; however, the data indicated a trend for lessened job satisfaction and an increased Discrepancy Score for those working in custodially oriented institutions ( $p < .15$ ).

A major, somewhat unexpected finding was that state psychologists appeared generally rather satisfied; according to the PA scale, 79.2% of total time is spent in activities rated either high or somewhat high in satisfaction. Analysis of the individual items constituting the PA scale revealed that as a group, state psychologists obtain their greatest gratification from training supervision and individual and group psychotherapy, moderate satisfaction from research, less satisfaction from performance of psychological evaluations, and very limited rewards from strictly administrative functions.

TABLE 1

CORRELATIONS BETWEEN DEGREE OF SATISFACTION AND AMOUNT OF TIME DEVOTED TO SPECIFIC ACTIVITIES

Activity (PA scale)	<i>r</i>
Psychological evaluations	.50**
Individual psychotherapy	.37*
Group psychotherapy	.56**
Supervision and training	.14
Administration	.15
Research	.62**

\*  $p < .01$ .

\*\*  $p < .001$ .

TABLE 2

MOST FREQUENT ANSWERS TO THE QUESTION CONCERNING ROLE CHANGES OF PSYCHOLOGISTS DURING THE PAST 18 MONTHS

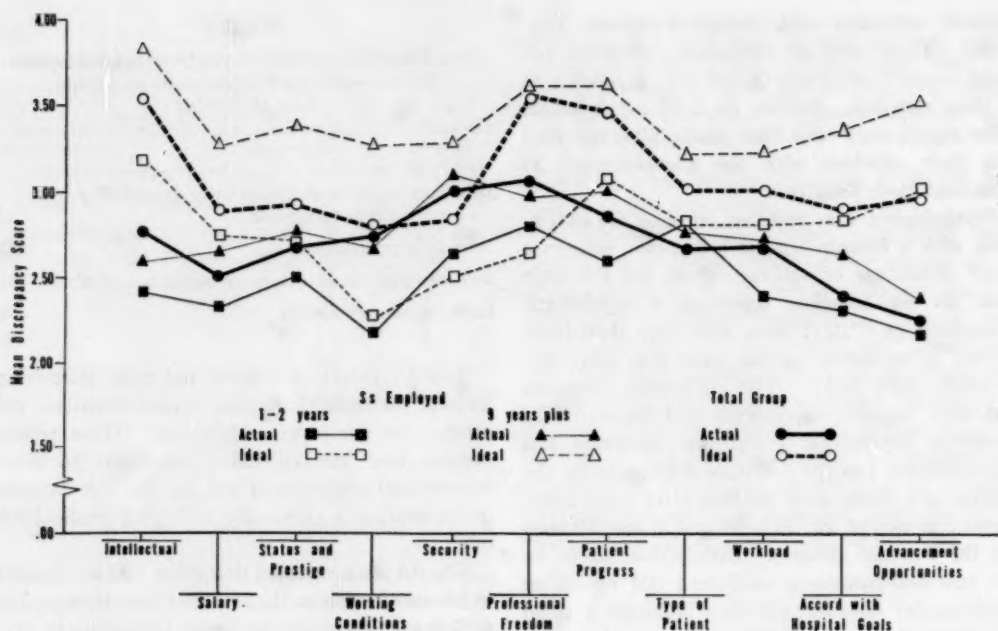
Answer	<i>N</i>
Diversification of role; administrative responsibility for new areas and programs	13
Increase in group therapy	12
Increased professional acceptance (status and prestige)	11
Increased research activity	6

Table 1 reflects a related and most interesting finding: the more time spent in most activities, the greater the degree of satisfaction. These results suggest that the clinical psychologist in state institutional employment has considerable latitude in structuring a personally satisfying professional role.

The AA scale revealed that other factors relevant to job satisfaction on the idealized level were ranked as follows (decreasing order of importance): professional freedom, intellectual stimulation, patient progress, opportunity for advancement, manageable workload, type of patient seen, status and prestige, and accord with hospital program objectives. Least important factors were working conditions, salary, and security. Comparison of the average abstract and actual profiles served to identify the areas of assumed satisfaction and dissatisfaction (see Figure 1). The largest discrepancies regardless of years of experience in state service occurred with three items: opportunity for advancement, intellectual stimulation, and patient progress; smallest discrepancies occurred on status and prestige, working conditions, security, and manageable workload. The open-ended questions relative to the "greatest satisfactions" and "greatest frustrations" associated with one's job elicited responses generally consistent with the foregoing.<sup>4</sup>

High frequency responses to the question "The most significant change in the role of psychology at my institution in the past 18 months has been . . ." are represented in Table 2. It is of

<sup>4</sup> The opportunity for professional freedom and to make a worthwhile professional contribution (in terms of treatment or training) were volunteered most frequently as the sources of greatest satisfaction; the greatest dissatisfaction was associated with having to work with incompetent (usually medical) professional personnel, excessive diagnostic assignments, and rigidity of administrative policy.



FACTORS OF ACTUAL - IDEAL SATISFACTION

FIG. 1. Discrepancy on the Actual-Abstract Scale between actual satisfaction and ideal expectations on 11 variables related to job satisfaction. (Averaged profiles of the two extreme experience groups and the total group are represented. Scale values were assigned to each item—e.g., low satisfaction = 1, high satisfaction = 4, etc. These values on each variable were then averaged for the groups involved. For purposes of this analysis, five groups based on 2-year increments of experience were used. The numbers of subjects in each group were as follows: 1-2 = 14; 3-4 = 21; 5-6 = 13; 7-8 = 9; 9 and over = 14. The total group  $N$  depicted in the figure was 71.)

interest that the most frequent responses were all positive in nature; the most frequent negative response ( $N = 4$ ) was of an increase in diagnostic service demands.

One final observation was that of the nine states studied, psychologists in Ohio and Iowa seemed most satisfied while those in Missouri and Illinois were significantly less satisfied ( $p < .05$  for both). Psychologists from these four states do not differ with each other (or from those in the remaining five states) on any of the other variables under consideration, suggesting that differences inherent in the state systems account for these results. On the other hand, the objective reality of the situation in any one institution was difficult to characterize due to the wide variability of ratings and statements obtained from psychologists within an institution—for example, failure to even agree as

to whether the institution was organic or psychologic in orientation.

#### DISCUSSION

A major and initially somewhat surprising finding in this study was that state employed clinical psychologists as a group are reasonably well satisfied, spending almost 80% of their time in gratifying activities. What then are the reasons underlying the high rate of turnover?

Part of the answer to this question resides in the finding that those individuals who have been in state employment longest are the most satisfied; this probably reflects a sample bias, namely, that over time, dissatisfied psychologists will separate themselves from the system.

Additional information is provided by the AA



scale, where analysis in terms of length of employment reveals important variations in the actual and abstract profiles. The idealized profile exceeds the actual satisfaction profile at every experience level; however, there is a tendency for the discrepancy between profiles to increase over time, largely as a function of the elevation of the expectancy profile. Actual or attained satisfactions also increase over time but at a relatively lower and less consistent rate (see Figure 1). While the limited *N* prohibits a year-by-year statistical analysis, certain trends are suggested. The lowest discrepancy occurred in the first year or two of employment; beginning about the third year and extending into the fourth there was a decided increase in expectancy, which then levels off, remaining relatively stable for 4 or 5 years, and then rises again in the oldest employment group (9 years' service or more). The attained or actual satisfaction profile is characterized by an initial rise and then a slight reduction, beginning about the fourth and extending until approximately the seventh year; this suggests a time of crisis and decision making concerning continued state employment.

An analysis of the 11 items which constitute the AA scale revealed that consistent satisfaction at all experience levels was expressed relative to the factors of security, work conditions, workload, and status. Beyond certain minimal levels, material considerations are of relatively small importance; i.e., the substantial salary revisions frequently advocated may partially compensate for other limitations, but are quite apparently not the principal answer to the problem of the recruitment and retention of psychology personnel. The sources of greatest continuing dissatisfaction were associated with an absence of intellectual stimulation, failure to observe patient progress, lack of accord with hospital policies, and limited opportunity for professional advancement. Those in the crucial 3-6 year employment category expressed a more pervasive dissatisfaction, including frequent mention of three additional factors: the type of patient with whom they were required to work (assumedly characterized by a limited treatment potential), a lack of professional freedom, and salary conditions (the only experience group to make an issue of wages).

The relatively greater satisfaction of chief psychologists, despite an elevation in their general expectancy level, probably reflects both their re-

peatedly tested capacity to adjust to the limitations of their specific employment situation, and the greater satisfactions inherent in this role, particularly the increased amount of highly valued professional freedom. The satisfaction of chief psychologists, most of whom are PhDs, is even more significant in view of the finding that staff level PhD psychologists are generally somewhat more dissatisfied than either the chief psychologist or their master level colleagues.

It is of interest that the article by Jacobsen et al. was based on an assumption of the central importance of the prestige factor as a determinant of job satisfaction. The present results suggest that neither status nor salary is as important as indicated in the earlier study based exclusively on psychologists in the Ohio system. It should be noted that psychologists in Ohio are a very well satisfied and therefore atypical group, relative to psychologists in other states.<sup>5</sup> Another possible reason for the devaluation of status and salary was the inclusion of additional factors in this study (patient progress, opportunity for advancement, accord with hospital policies), which acted to displace them in importance.

IP scale results were noteworthy in identifying the level of relating satisfaction with other professional disciplines, and particularly the need for improved relationships with their medical colleagues and hospital administration. While a significant relationship was found between the total AA scale Discrepancy Score and the general level of interprofessional relationships (.05 level), the IP scale did not correlate significantly with the PA scale. Indeed, results indicate that those who rate their interdisciplinary relations as poorest, respond appreciably above the mean on one or more of the activity categories, suggesting that these psychologists compensate through an increased satisfaction from other aspects of their work (those respondents who rated interdisciplinary relations as average or good do not rate specific activity aspects of their work as so satisfying).

In summary, it may be stated that while this study has provided no panacea for the difficult and complex problem of the clinical psychologist's professional unrest, a step has possibly been taken

<sup>5</sup> However, the observation in the first study that the job satisfaction of Ohio psychologists was the lowest of the six different mental health professions studied, is a sobering consideration.

towards clarifying some central issues. Both the PA and the AA scales proved discriminating indicators of specific factors related to job satisfaction. Needed is a longitudinal study to assess predictive validity in light of possible temporal shifts in satisfaction, and verification by actual employment terminations over a span of several years.

One final point seems indicated. The questionnaire accurately reflected the current trend toward the clinical psychologists' increased involvement in the new role of ward and program administration (see Table 2). The clinical psychologist's broad training which makes him a jack-of-all-trades and master-of-none, equips him to be of great potential service in the varied role of ward and program coordinator, directed ultimately towards development of a more therapeutic hospital community. Some psychologists have greeted this developing role with reservation, advocating that the clinical psychologist is best utilized as a resource person. Other clinical psychologists would like to see their profession become a more integral part of the psychiatric team. The possibilities of friction are certainly extant in this new role. It has been stated,

only somewhat facetiously by some extreme proponents of this role, that they would not object to the retention of the physician as captain, so long as they could quarterback the team. In the same vein some medical administrators have come to regard the concept of a "therapeutic community" as a clever subterfuge to subvert their authority. However, an inseparable coincidence of goals appears to exist: a genuinely therapeutic hospital atmosphere must encourage the growth potential of patients and staff alike. There is currently hope that the role of ward and program coordinator is a development in the direction of group decision making processes which will have a democratizing influence on the hospital structure, leading to an increase in the role satisfaction of not only the psychologist, but of all psychiatric hospital employees, including medical staff.

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## Comment

### Free Will and Cruelty

As one who has been cited in the continuing controversy over "free will" (Budd, 1960; Hartmann, 1961), I should like to make clear what my paper (Nettler, 1959) "Cruelty, Dignity, and Determinism" did, and did not, say.

Budd (1960) has used this study in support of his statement that "logically the person who adheres strictly to the assumption of free will in behavior must also be a sadist" (p. 217). "Sadist" is a dirty word—like so much of the psychological terminology taken over by laymen—and it is not used in the work referred to. Nor did this paper hold that "logic" requires the indeterminist to be cruel; however, his "psychology" seems to. The cited paper does try to reduce the fruitless quarreling on this subject—of which the recent exchange is an example—by suggesting that: definitions not be confused with propositions, "free will" and "determinism" be viewed as assumptions rather than as facts, these assumptions be clearly defined and tested for their associations and consequences.

One alleged consequence of the belief in "free will"—that it "dignifies" man—was tested in one of its dimensions and found wanting. Individuals who, by degree, assume that present behaviors are *not* conditioned by past circumstances and who hold that "if a person really wants to straighten out, he can solve most of his problems by himself" ("indeterminists") are persons who are more likely to recommend "disinterested revenge" (Ranulf, 1938) in response to behavioral deviations.

Other alleged consequences of the assumptions of free will and determinism can be examined in similar fashion. Such examination may force us to accept a Machiavellianism: that for purposes of understanding and controlling the other person, we can proceed most efficiently under the assumption of determinism; that for purposes of "self-control" or "self-motivation," the assumption of free will is efficacious.

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GWYNN NETTLER  
Dando, S.A., Mexico City

### Recommendation Letters and Forms

Although a young man's fancy is said to turn to love and such with the coming of the spring, a college professor's fancy sometimes just turns. There is John, completing his bachelor's or master's degree at the end of the semester, an exceptional student who has been a source of stimulation and pride in past months—as well as concrete help "beyond the line of duty" in research projects from time to time. Encouraged to apply for advanced study, he has done just this and the flood of requests for letters of evaluation and recommendation now litter the desk. Multiply John several times and the conscientious professor is at his wit's end. Ten students applying to 10 institutions generally leads to 100 letters of recommendation. Of course, the situation is not really this bad because one letter will many times suffice for several institutions—or so it was in the past.

Over half of the requests the writer has received during the past few months from departments of psychology for information concerning prospective graduate students have started with a statement acknowledging awareness that you are a very busy person. This is followed with a statement to the effect that life is going to be simplified for you; a special form, needing only checks, has been devised with a small space for special remarks. What could be finer! Ironically, however, what is sometimes initiated to help many times turns out to hinder. It turns out that each "simplified form" is just a little different than the others, thus requiring special time and attention. All are seeking essentially the same information regarding the applicant, but in a slightly different manner. And some, of course, merely request the usual letter "giving special attention to such factors as . . ."

Sophisticated approaches to obtaining information about applicants for graduate study which make use of forms and rating scales, with adequate space for additional remarks at the discretion of the recommender, are to be commended as attempts to objectify, standardize, and simplify a time-consuming process in a manner yielding more accurate and reliable information. Yet because of the wide diversity of forms being used, the conscientious recommender finds himself with considerably more rather than less work, and he finds himself faced with having to reorganize his knowledge about an applicant several times to fit several different frames of reference. Under these circumstances it might well be that accuracy and reliability are lost rather than gained.

I do not presume to know the exact details as to how a modification of the present system might be achieved, but I have a hunch that this problem affects enough people so that there would be a reasonable chance of obtaining sufficient cooperation and motivation to bring about desirable changes. I would like to share the following idea, for what it may be worth, with a plea for consideration by individuals, groups, and committees that might be in a position to explore it more thoroughly. In my utopia there would be one form which would be used by all departments of psychology in higher institutions when requesting information regarding a prospective graduate student. There would also be one form which would be used by all departments of psychology in state hospitals when requesting information regarding prospective psychological employees. I, as well as my colleagues, could have a supply of these forms mimeographed. We could complete one for a student when information is first requested about him; after that we would only have to insure that a secretary copied the information correctly on identical forms as further requests were received.

In a day of increased enrollments, increased committees, and increased paper work—to say nothing of clinical, research, and teaching responsibilities—a coordinated system for recommendations among departments of psychology, with a common form used by all, would be a great time saver. And it would lead, I daresay, to more conscientious and accurate appraisals. Use of the same form consistently would allow one to build up an appropriate set of norms making for more accurate judgments and evaluations. I would be far happier to complete one long form once for a given student, supplying more detailed information than is usually requested currently, than to spend several hours modifying the same information so as to fit the forms requested for several different departments of psychology. I cannot help but wonder whether others would not share my feelings.

STANLEY C. MAHONEY  
Fort Hays Kansas State College

### An Open Letter on Membership Fees

This note is both a letter of inquiry and a statement of position concerning an impossible situation: the ever increasing membership dues and journal fees of APA. We, as young academicians, find the problem of paying the rocketing costs of membership and journal subscriptions almost insurmountable.

As a simple notice of fact, one of us has been, and will be forced to continue, dropping journal subscriptions as prices increase. Another is already at rock bottom and still finds it difficult to meet the constantly increasing membership fee.

Again, as a plain statement of fact, we will—if forced to continue curtailment of journal subscriptions—be removing ourselves one step from the stream of communication among psychologists. This statement is made with full realization of our minor position in the field. But we are at an early point in our careers in psychology and by no means regard ourselves sterile as yet. As you well know, science advances by free interchange of ideas. We feel after having talked with many other colleagues of our status that the problem is not unique to us. Our letter represents a symptom of the opinions held by many younger psychologists.

Of additional import is the finding that faculty members in other scientific disciplines, including biology, physics, chemistry, and sociology, all pay substantially less to their respective national organizations. It is true that none of these groups offers as many journals as APA. However, for the most part our journal subscriptions involve considerable extra costs—which, like the membership fee, are increasing. With reference to the latter, we should mention that the *Psychological Record*, published at Denison University, gave the subscriber in 1960 332 pages for \$3.00 to APA members and for as little as \$1.50 to students. If they can do this with only a fraction of the subscriber volume of any of the APA journals and without advertising revenue, some excesses in manufacturing costs must be involved. We simply indicate this to suggest possible sources for economy.

With respect to journal subscriptions and costs, we would like some information. Have subscription costs been increasing because of increasing printing costs alone; has the increase in subscriber volume, and the economies associated therein, been insufficient to absorb the inflationary increases in manufacturing costs? In fact, we are curious about the subscriptions over the last 5 years. Have these paralleled the almost doubling of APA's size or have these diminished as APA has grown? A survey of the relative changes in subscriptions per member would provide some insight into the matter of increasing costs.<sup>1</sup>

In the October 7, 1960 issue of *Science* there appeared an interesting article (pp. 939-942) comparing the costs of membership and journals of the various sciences. While it was noted that the costs of all societies increased between 1937-59, certain incongruities were apparent and are pertinent to the discussion at hand. Regarding the dues increase:

<sup>1</sup> Correspondence with John G. Darley has indicated that the answers to these questions relating to subscriber volume are generally pessimistic. Perhaps a return to some system akin to the old club program would be a worthwhile solution. This may go far towards aiding the economical problem of subscriber volume, and, what is more, it would certainly increase communication of research.



the average, except for psychology, was about 56 per cent. The average dues for psychology were somewhat out of line because of a *very large increase in dues in one society* [italics added] between 1948 and 1959 (p. 942).

The field of psychology ranked seventh of the eight fields in 1937; but it leaped to second in 1959! The incongruity is heightened when one considers median salary in relation to annual dues. The median salary of social scientists (no further breakdown) is at the bottom while dues cost ranks close to the top. The results of the recent National Science Foundation survey of scientific personnel (*NSF, Scient. Manpower Bull.*, 1960, April) indicates that this median income applies accurately to academic psychologists. In other words not only have the dues increased disproportionately for psychologists over the period 1948-59, but they exist now in extreme disproportion to the income of the society membership.

The story does not unfortunately end here. Another interesting point is made in the article concerning increased journal costs. Dealing with the period 1948-59 (the other basal year, 1937, includes only five fields and is not as representative), we can note comparisons among all nine sciences considered. The median increase in journal costs for members is 69% and for nonmembers, 112%. For the field of psychology, however, the data are: 299% increase in journal costs to members and only a 64% increase to nonmembers!

Clearly both sets of figures are rather disquieting to active members in the field who, in order to remain abreast of the field, must maintain contact with current research and theoretical activity.

A related question, of course, concerns the operating costs of an expanding organization. We fully appreciate the fact that such expenses can increase markedly as "Topsy" grows. But is it not time we revisited the problem of economy? What is the input-output ratio? We do not question that "General APA Activities" require \$67,356.—, or that "Central Office Costs" (Management ?) must have \$267,810.—, or that "Boards and Committees' use \$50,350.— (*Amer. Psychologist* December 1959). The point is: are all of the functions performed necessary? Further, are the necessary functions performed economically? The primary function of APA should be to facilitate the exchange of ideas among psychologists.

In closing, rather than let this correspondence be viewed as a catharsis for the writers, the suggestion is made that APA consider a survey of the following. Costs of each of the services provided to the members should be determined relative to the value placed upon these services by the membership. Once this determination is established we should have a basis for stabilizing costs and, hopefully, of reducing costs by eliminating services which the membership may deem lacking

in value commensurate with cost. Such considerations should be put to a vote by the total membership. Luxury services, then, might be provided by some independent agencies.

As a further step, two constructive courses of action seem appropriate. One is for other members who share the views expressed or similar ones (certainly not all areas have been covered) to state their feelings openly in these columns instead of griping at convention hotels. Secondly, it would be valuable for the Council of Representatives to provide more *detailed* statements regarding costs and income and related to *specific* services along the lines discussed above. If the costs for providing ancillary activities have grown disproportionate to their value, then it is time to reconsider: has psychology created a bureaucratic monster which is now devouring the creator?

ROBERT J. SEIDEL  
PAUL T. MOUNTJOY  
WERNER K. HONIG  
Denison University

### Undergraduate Psychology Majors

In 1950 a report was made of the number and percentage of students who graduated with a major in psychology from Washington Square College (an undergraduate liberal arts division of New York University) during each year of the decade 1939-49 (*Amer. Psychologist*, 1950, 5, 492-494). The year 1939 had been chosen as a starting point because it preceded the wartime publicity about, and subsequent rapid expansion of, the field of psychology. Some data, comparable in part to that study, are now available for the 1960 graduating class. It is interesting to see what has happened to these registration trends after another decade.

As reported in the above mentioned study, the proportion of psychology majors in each graduating class had increased steadily from 3% in 1939 to 13% in 1949. For the 1960 class it is 11% indicating that, percentage-wise, psychology is holding its own within the college. However, it should be noted that this is actually a considerable drop in absolute numbers. In 1949, a peak year for GI student enrollment, the total number of graduates was 1,527 and there were 197 psychology majors among them. In 1960 the graduating class had only 453 students, of whom 48 were psychology majors. This figure represents what is probably the nadir in college registration due to the low prewar birth rate. The number of college aged people in the United States was very small during the 1950s, but has now begun to rise because of the sharply increased birth rate of the 1940s.

The lowered absolute number of psychology majors does not presage a decreased interest in psychology

among college students. Two facts support this statement. First, the percentage of students who chose a psychology major, as noted above, continues at approximately the same level as in 1949. A second fact relates to the expressed interest in psychology by incoming freshmen. Checking back to the admissions records of the 1949 graduating class, it had been found that only 24 (2%) of the 1,527 students, had at the time they were admitted to the college, expressed an interest in psychology either as a first or second vocational choice. For the 1960 class, 32 (8%) of the 453 graduates had indicated such a preference upon admission to the college. Publicity about psychology has apparently alerted more incoming freshmen to its possibilities as a profession.

If the above trends concerning majors in psychology are typical of what is happening in other colleges, then we can expect that graduate departments of psychology will continue to have ample sources of recruitment.

ALICE GUSTAV  
*New York University*

### A Division of Psychotherapy

I would like to comment on the issue of whether or not a Division of Psychotherapy should be formed.

At the 1960 Annual Convention, a meeting was called for those psychologists interested in forming a Division of Psychotherapy. There was a lively discussion of this issue, which resulted in a decision to study the problem further and in the formation of an interim

organization, called Psychologists Interested in the Advancement of Psychotherapy.

To obtain some data relevant to this controversy, every tenth page of the 1961 *Directory* was surveyed for members expressing an interest in psychotherapy practice, research, or theory. Examples of the listings tallied are: psychother., grp. ther., child ther., psychother. resch., psychoanal. ego psych., non-directive ther., psychoanal. theory, etc. Not tallied were: couns. (and all its variants), clin. psych., priv. prac., clin. resch., sch. psych., psychosomatics, clin. methods, etc. The results yielded an estimate of 4,750 members who indicated an interest in the area of psychotherapy, which is 25% of the total 1961 membership ( $N = 18,948$ ). (This is probably a gross underestimate because of the use of a strict criterion of interest in psychotherapy.) One method of predicting how many members would join a Division of Psychotherapy is based on the statistic that 45% of the APA members belong to one or more divisions (as estimated by another survey of every tenth page of the 1961 *Directory*), which suggests that this group of 4,750 would contain 2,138 potential division members. This hypothetical division would be second in size to Division 12 ( $N = 2,466$ ); the third largest would be Division 8 ( $N = 1,509$ ).

This writer feels that, despite the pros and cons of forming a Division of Psychotherapy, the sheer magnitude of the above numbers warrants serious consideration.

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# Psychology in Action

## INCOMES OF INDUSTRIAL PSYCHOLOGISTS<sup>1</sup>

MARVIN D. DUNNETTE

*University of Minnesota*

JACK Sawyer (1960) has recently published a comprehensive analysis of the education and employment of members of Division 14 of APA. Because he used the *APA Directory* as his source of data, he could not include information concerning salary. The study reported here is based on a survey of Division 14 members designed to elicit salary information and to relate this information to other factors such as age, education, and nature of employment.

### SAMPLE

During August 1960, questionnaires requesting salary information were sent to a random sample of 359 members of Division 14. The sample was selected by choosing every second name from a mailing label runoff of Division 14 members obtained from the APA Central Office. Returns were obtained from 289 (81%). This seems to be a high rate of return in view of the personal information included in the questionnaire. Of the 289 questionnaires returned, it was necessary to discard 17 because they were so incompletely filled in that no meaningful comparisons could be made. The results reported below are based on the 272 questionnaires<sup>2</sup> which were completed sufficiently to make comparisons.

Personal characteristics of the sample may be compared with those reported by Sawyer<sup>3</sup> (1960) in order to estimate its degree of representativeness of Division 14 membership. Sawyer found that 81% of the 708 Division 14 members tabulated hold the PhD degree.

<sup>1</sup> The survey on which the results of this article are based was financed by members of the CINCON group, a group of industrial psychologists who meet periodically on an informal basis to discuss developments and research in the area of industrial applications of psychology. The members of this group are: Philip Ash, Donald E. Baier, Henry R. Brenner, William B. Chew, Robert D. Dugan, Marvin D. Dunnette, Edwin A. Fleishman, Donald L. Grant, Jerome S. Kornreich, William G. Mollenkopf, John H. Rappaport, Robert Tanofsky, Joseph Weitz, and John V. Zuckerman.

<sup>2</sup> In no case, however, do the numbers in the tables "add up" to 272. This is because many questionnaires were partially completed and had to be dropped for the purpose of some of the cross tabulations.

<sup>3</sup> Sawyer's data include a nearly complete tabulation (708 out of 716) of Division 14 members.

In our sample, 220 (81%) hold the PhD degree. Table 1 compares our sample with Sawyer's tabulation in terms of type of employment.

The 10 schools producing the largest number of persons in our sample were (in order) Purdue, Ohio State, Minnesota, Columbia, State University of Iowa, Chicago University, Pittsburgh, Michigan, New York University, and Western Reserve. Of these 10, 9 are among the top 10 in Sawyer's tabulation. For the total membership, the University of Pennsylvania is in tenth place and Pittsburgh is not among the top 10.

These comparisons show then that our sample may be regarded as a fairly good representation of the total Division 14 membership. Results of the survey are given below—separately for academic and nonacademic members.

TABLE 1

TYPES OF EMPLOYMENT REPORTED BY INDUSTRIAL PSYCHOLOGISTS RESPONDING TO SALARY SURVEY AND COMPARISON WITH TABULATION OF ALL DIVISION 14 MEMBERS

Classification	Salary survey		Sawyer tabulation	
	N	%	N	%
Industry	87	32	249	35
Academic	79	29	186	26
Private Practice and Consulting	64	24	197	28
Government and Other*	39	15	76	11
Total	269	100	708	100

\* The classification given by Sawyer under Government includes only Government employees. In our case, it is somewhat of a catch-all including not only Government employees but also those employed with firms in Construction, Transportation, and Public Utilities. Our Industry classification is, therefore, less broadly defined than Sawyer's including only firms in Manufacturing, Trade, Banking, and Insurance.

TABLE 2

RANGES AND MEDIANS FOR PRIMARY AND TOTAL INCOMES REPORTED BY NONUNIVERSITY DIVISION 14 MEMBERS  
ACCORDING TO EDUCATIONAL LEVEL AND INDUSTRY GROUPING

Classification		MA degree		PhD degree	
		Primary income	Total income	Primary income	Total income
Manufacturing	N	21	21	43	43
	R	7,500-25,000	7,650-32,500	9,540-26,500	9,840-35,900
	M	12,000	13,900	15,000	17,350
Trade, Banking, and Insurance	N	8	8	15	15
	R	8,300-13,000	8,600-14,500	10,300-24,000	11,000-25,500
	M	10,000	11,500	14,500	16,500
Private Practice and Consulting	N	12	11	52	52
	R	8,000-30,000	8,500-31,000	7,200-75,000	8,600-86,000
	M	14,000	15,000	17,000	20,000
Government and Other*	N	6	6	33	32
	R	8,400-12,500	8,600-18,500	8,000-52,000	8,000-67,000
	M	11,500	12,250	14,000	15,000

\* Including Construction, Transportation, and Public Utilities.

#### RESULTS FOR NONACADEMIC MEMBERS

The questionnaire asked each respondent to give his present annual salary from his primary employer. He also was asked to estimate the amount of additional annual income from each of several sources such as profit sharing, cash and stock bonus, part-time and summer teaching, book and test royalties, consulting and giving talks, etc. The results given below, therefore, are based on two income figures: the annual salary

earned from the respondent's primary employer, and the combined total annual income from all sources. The relative contribution to total income from each of these so-called "additional" sources is presented in a later section.

**Industry Group.** Each nonuniversity respondent was asked to indicate the industry group to which his firm belonged. Table 2 shows our four broad groupings (as defined in Table 1) and income levels within each. It is obvious that a large difference in incomes exists between members with MA degrees and those with PhDs. For the median income levels, this difference ranges from \$2,500 in the Government and Other group to \$4,500 in the Trade, Banking, and Insurance group.

For both MA and PhD degrees, highest incomes are found in private practice and consulting jobs. Manufacturing runs a fairly close second. Although comparing poorly with Manufacturing for MA degrees, Trade, Banking, and Insurance run a close third for persons with PhD degrees.

**Age and Year of Highest Degree.** Relationships between income and age and year of highest degree were examined<sup>4</sup> for all nonacademic industrial psychologists included in the sample. The relationship is a high one for both factors.

One might well ask, however, whether or not this relation holds for persons employed in each of the different industry groups shown in Table 2. The Trade,

<sup>4</sup> Tables showing relations between age, year of highest degree, and income were prepared and may be obtained directly from the author.

TABLE 3  
KIND AND AMOUNT OF INCOME RECEIVED FROM OTHER  
SOURCES AS REPORTED BY NONUNIVERSITY  
DIVISION 14 MEMBERS

Form of payment	Persons saying they receive this form of payment		Median amount received
	N	%	
Cash bonus	36	20	\$1,500
Stock bonus	24	13	500
Profit sharing	31	17	2,000
Company supported insurance and/or pension	52	29	700
Part-time teaching	38	21	800
Summer school teaching	2	—	—
Consulting, giving talks	30	17	500
Book or test royalties	8	4	500
Deferred income plans	9	4	1,600
Other income	18	10	500



TABLE 4

RANGES AND MEDIANS FOR PRIMARY AND TOTAL INCOMES REPORTED BY ACADEMICALLY EMPLOYED DIVISION 14 MEMBERS  
ACCORDING TO RANK AND TYPE OF INSTITUTION

Academic rank		Private institution		State supported institution	
		Primary income	Total income	Primary income	Total income
Assistant Professor	N	2	2	6	6
	R	6,400-8,500	10,500-11,400	7,000-10,400	7,300-14,700
	M			8,350	9,500
Associate Professor	N	4	4	11	11
	R	6,000-12,000	7,700-20,000	8,000-15,300	9,000-18,300
	M			9,700	13,000
Professor	N	18	18	26	26
	R	7,880-22,000	9,880-60,000	9,000-17,000	11,550-29,300
	M	11,900	19,000	12,000	16,800
Research or other nonteaching appointment	N	8	8	3	3
	R	11,700-28,000	12,130-29,200	7,000-11,000	11,000-13,500
	M	14,000	16,750		

Banking, and Insurance and the Government groups were too small to allow separate analyses. The incomes of members in the other two groups (Private Practice and Manufacturing) were, however, separately compared with age and year of highest degree. The same sort of trend was shown separately for these groups. For example, the median primary income of PhD consultants ranges from \$12,400 for those who received their degrees in 1956 or later to \$19,500 for those who received their degrees in 1935 or before. Similarly, the median primary income of PhDs employed in Manufacturing ranges from \$10,700 for those who received their degrees in 1956 or later to \$17,100 for those who received their degrees in 1935 or before.

*Size of Firm and Level of Responsibility.* The possible relation between size of firm and income was studied in two ways.<sup>5</sup> First, comparisons were made between income levels and "firm size" defined as total number of employees. Secondly, comparisons were made between income levels and "firm size" defined as annual sales volume. Neither of these comparisons showed any systematic relation between income level and size of firm.<sup>6</sup>

<sup>5</sup> Division 14 members with consulting firms or in private practice were excluded from this analysis because their income obviously is not nearly so dependent on salary administration schemes or policies as is the income of those who are employed with "nonpsychological" firms.

<sup>6</sup> Tables showing relations between "firm size," "level of responsibility," and income were prepared but are not included in this report. The author will send copies of these tables to anyone who requests them.

In an effort to discover the relation, if any, between "level of responsibility" and income, comparisons were made between income levels and number of persons supervised. Again, no systematic relationship was found.<sup>6</sup> The lack of a relationship between these factors (firm size and responsibility) and income level is an important finding. Small firms are paying Division 14 members as much as large firms. Also, the level of income seems *not* to be related to level of responsibility if this is defined as number of persons supervised. It is apparent that industrial psychologists are being paid primarily for what they know (e.g., educational level) and for the amount of experience they have had. In other words, they are being employed, by and large, as staff specialists or as professionals in a manner similar to the employment of a legal counsel, medical director, or outside consultant.

*Kind and Amount of Additional Income.* As already mentioned, each respondent was asked to estimate his annual income derived from a variety of nonprimary salary sources. Table 3 shows the kind and amount of such additional income reported by nonacademic Division 14 members who responded to this item on the questionnaire.

#### RESULTS FOR ACADEMICALLY EMPLOYED MEMBERS

Only 1 of the 79 academically employed respondents does not hold the PhD degree. Results are presented for the 78 persons who do. Table 4 shows income data for academic people according to rank and type of institution. It is apparent that most Division 14 members

employed in universities are at the Associate or full Professor levels. As is to be expected, higher ranking academicians are paid more than lower ranking ones. They also earn a larger supplementary income than those at the lower ranks.

*Kind and Amount of Additional Income.* Table 5 shows the kind and amount of additional income earned by academically employed respondents. A very large proportion (77%) earn supplementary income through consulting activities. With the exception of bonus and profit sharing arrangements, the amount of supplementary income is greater in all categories for academic people than it is for nonacademicians.

*Comparison of Academic and Nonacademic Incomes.* Table 6 summarizes income information for Division 14 psychologists holding the PhD degree according to their primary employment. The total picture presented by these data suggests that academicians are in a rather favorable position in comparison with nonacademicians.

TABLE 5

KIND AND AMOUNT OF INCOME RECEIVED FROM OTHER SOURCES AS REPORTED BY ACADEMICALLY EMPLOYED DIVISION 14 MEMBERS

Form of payment	Persons saying they receive this form of payment		Median amount received
	N	%	
Cash bonus	0	0	—
Stock bonus	0	0	—
Profit sharing	0	0	—
Company supported insurance and/or pension	14	18	\$1,000
Part-time teaching	15	19	1,300
Summer school teaching	13	17	1,200
Consulting, giving talks	60	77	2,000
Book or test royalties	26	33	1,000
Deferred income plans	5	6	1,500
Other income	20	26	2,000

TABLE 6

RANGES AND MEDIANS FOR PRIMARY AND TOTAL INCOMES REPORTED BY DIVISION 14 MEMBERS WITH PhDs ACCORDING TO EMPLOYMENT

Classification		Primary income	Total income
Manufacturing	N	43	43
	R	9,540-26,500	9,840-35,900
	M	15,000	17,350
Trade, Banking, and Insurance	N	15	15
	R	10,300-24,000	11,000-25,500
	M	14,500	16,500
Government and Other*	N	33	32
	R	8,000-52,000	8,000-67,000
	M	14,000	15,000
University	N	78	78
	R	6,000-28,000	7,300-60,000
	M	11,200	15,100
Private Practice and Consulting	N	52	52
	R	7,200-75,000	8,600-86,000
	M	17,000	20,000

\* Including Construction, Transportation, and Public Utilities.

If persons employed in private practice or as consultants are excluded from the nonacademic sample, the salary position of the academicians is seen to be relatively close to that enjoyed by nonacademicians. It appears that universities, by allowing staff members a good deal of freedom for extra income producing ventures, are doing a good job of effectively competing with private industry for the services of industrial psychologists.

## REFERENCE

SAWYER, J. The industrial psychologist: Education and employment. *Amer. Psychologist*, 1960, 15, 670-673.

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## Psychology in the News

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Many readers of this journal must have had a personal sense of shock when they read in the newspapers of June 19 that Albert Deutsch had died, apparently of a heart attack in his sleep, while attending a meeting in England.

Albert Deutsch was known for several and surprisingly different things. Many psychologists, particularly clinical persons, will remember that he was a crusading journalist, indeed somewhat of an exposé journalist, in seeking to help the plight of the mentally ill. He could also be a scholarly writer and still make clear to the reader the human beings in the story, as when he wrote the definitive work in its areas, *The History of the Mentally Ill in America*. At the time of his death he was Editor of the projected *Mental Health Encyclopaedia* being prepared by Franklin Watts, Inc., and the undersigned had worked with him on some parts of that book. Deutsch had also been working for years on a survey of research in psychiatry and psychology.

He spent most of each year in Washington, but for some years he had spent his summers in San Francisco and Berkeley, and ordinarily he was on the West Coast at Labor Day time and missed our APA. He was thus in our pressroom only a few times, but he read the journals—and he read our minds! He kept in very close touch with the research, practice, and views of psychologists, and had many close friends and countless acquaintances in this area. So it seems good to say more here about this unusual man.

\* \* \*

Al Deutsch was interested in many things, but always in their relation to human beings. He had a respect for but no interest in writing as writing. He did not write to "express himself," but worked to arrive at the facts, to combat injustice, and to relieve human suffering.

Al Deutsch was a great human being. Having known and worked with him for years, I am still surprised to learn new things about him these days. Others who have known him longer and were closer to him agree that they, too, were always being surprised to find another sphere in which Al Deutsch had an informed interest, or another place in so-

ciety in which he had a circle of people who felt close to him.

His gift for friendship flourished particularly in New York, San Francisco, and here in Washington. But in truth he was nationally known as very few persons are. He was personally and warmly regarded by countless persons throughout this country.

Not the least of his contributions was a kind of unity his warm personality gave to a field which is so often discouraging and depressing—and divided. Although a layman, he was elected a Fellow of the American Psychiatric Association, and I think he was an honored co-worker, or a favorite brother, in every one of the disciplines and schools of thought in mental illness.

Al Deutsch could not have won the respect of so many different kinds and schools of persons in mental health if he had not had a wide understanding and respect for their different and sometimes conflicting views. But he was quite the contrary of that politician who is all things to all men. He was an individualist of a kind not often met. He hated pretense and snobbery and the vanity of bureaucratic power, so far as these might serve to perpetuate injustice or ignorance. So far as they did not, he laughed them off as inevitable foibles of the human race. Unlike many who are interested in social reform, he had a sense of humor.

\* \* \*

Al Deutsch was also, and perhaps first and last, a crusading newspaperman. Many will remember his pioneering columns for the newspaper *PM*, for the *New York Post*, and for national magazines. He was a digger, and a prober, and he matured to become a scholar without diminishing his burning sense that action had to follow discussion "if we are to help three-quarters of a million people we have locked away in darkness." He was in the direct tradition of Lincoln Steffens and other journalists who have used their investigative talents to open up dark rooms and let in the sunshine and fresh air of public discussion.

As a person, Al was a rare spirit, a wonderful companion, and a man of transparent honesty and

courage. He was not bowed down by the monolithic opposition which some forms of organized medicine have to social progress, and he was not silenced by the late Senator McCarthy. He had guts. Al was a tireless conversationalist, and he loved parties if they were small enough that one could really talk. Although he was an extremely serious person, his sense of humor never left him.

There are two things which countless persons will surely remember about him: his peculiarly flat voice asking the most probing questions; and his smile breaking out around his tobacco pipe, as in the midst of discussion (of mental illness or whatever) he remembered something funny which human beings, doctors or patients, had done.

His was a very gentle spirit to have done so much against such barriers as the monumental social inertia which is added to the intransigent difficulties of the unknown in mental illness. We have

cause and we have need to remember the smiling courage of Albert Deutsch.

\* \* \*

An informal committee, headed by Julius Schreiber, of Washington, is making plans for a foundation to perpetuate his name, to foster, as he fostered, a forthright human approach to the problems of the mental health field. Papers of incorporation are being drawn as this is being written, and consideration is being given to various proposals. One suggestion is that a prize for outstanding journalism in this field should be named after him, and another suggestion is for an annual invited address to be sponsored at a professional meeting each year. On the committee to consider proposals and to make recommendations to the foundation which will eventually be set up are Robert F. Morse, Philip Sapiro, and the undersigned.

—MICHAEL AMRINE



ALBERT DEUTSCH

—Allan Roos

October 23, 1905—June 18, 1961



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# Psychology in the States

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## People to People

President Sukarno came to town last month. Before him Sekou Touré. Quite before him Mr. K. And several months ago President Kennedy dedicated the National Wildlife Federation building 200 feet northwest of APA while our employees watched from our balcony.

The Chairman of the Department of Psychology at a university in East Pakistan came to APA last week. Before him a Director of the Japanese Psychological Society. And before him the psychologist who is Dean of Women at a university in Iran. This time the APA employees stood even closer as they had a chance to welcome their own visitors to their own white house on Sixteenth Street.

Somehow the visits, while always pleasant for us and we hope helpful to our visitors, frequently result in either twisting our frame of reference slightly out of shape or at least unhinging it at the corners. The insurance problem gets to seem less monumental, APA dues no longer feel quite as exorbitant, relations with psychiatry come to look less life-and-death-like. Even Osgood's tome on experimental psychology comes out, for all its solid science, looking lighter than his less hard-headed, more recent, much more immediate excursions into international relations, tension reduction, and world peace.

We are impelled to these few observations because it suddenly dawns on us, as axioms are wont to, that when Maslow talked about a hierarchy of motives he may not have meant only the man on the raft without thoughts of color TV. He could have been talking about the psychologist in less favored climes glad to have maze and stopwatch and willing to leave to the future dreams of electronic gear, tools of the clinician, complete sets of journals, and affiliated state psychological associations.

We thank our visitors for unwittingly teaching us some fundamentals. And we thank our readers for continuing to send us materials which demonstrate that psychology, like love, is everywhere but that the many-splendored character of each is a function of the gestalt which provides the setting in time and place.

**Virtue, Its Own Reward.** Psychologists seem conspicuously uncomfortable about peddling wares,

even more so about guaranteeing results. The modesty is becoming, if not quite in the entrepreneurial tradition. At least it turns out that captains of industry seem to look with sufficient disbelief on such unwanted lack of self-assertion as to seek it out.

Several months ago, there appeared at the APA Central Office a publisher seeking the addresses of our state association secretaries, the better that business and industry might find their way to reputable consultants. We have since received a copy of *Personnel Marketplace*, and the roster is there in its entirety.

As if to validate this evidence of good faith, Clarence B. Randall, former board Chairman of Inland Steel, writing on "The Myth of the Psychologist" in the April issue of *Dun's Review*, has his article introduced as follows:

In management's eyes, he may seem a kind of witch doctor versed in strange rites, mysterious incantations, and cabalistic ink-blots. In reality . . . the "magic" of the psychologist is so closely allied to the art of management that it can prove a vital aid to corporate vigor and growth.

We do not know whether Kilroy and/or the Illinois Psychological Association were there, but the article by this former Chairman of President Eisenhower's Committee on Foreign Trade, sent by an IPA member, has some nice things to say about us.

**On Blowing One's Own Horn, Harmoniously.** The exigencies of space do not permit us to refer to many laudable efforts sent us by readers who have carried psychology's own ball. We have tried over time to present a representative sample. Most current example is a nine-page manuscript prepared by Muriel Oberleder in serving as representative of APA and the New York State Psychological Association at the third Annual Conference of Voluntary National Organizations held in New York recently by the National Council on the Aging.

The Oberleder presentation is a fine blend of straight talk, good sense, and dignified description of the efforts of psychology and psychologists. Speaking to a wide-ranging audience, Representative Oberleder delivered a jargonless message yet one which bespoke clearly psychology's commitment to scientific investigation. Her listeners heard

of the Division on Maturity and Old Age, APA's participation in the White House Conference on Aging, our publication *Psychological Aspects of Aging*, the contributions of the late Irving Lorge, and the research studies of psychologists generally.

No lilies were gilded:

Psychologists like everybody else who works with the aged, have as the primary task the separation of fact from fiction about the aging process. Probably few psychologists enter the field of aging without having certain stereotyped notions themselves about the rigidity of old people, their decreasing mental capacity, their negative personality changes, and their destructive adjustment patterns.

But fortunately, because of the nature of their work, psychologists learn very soon that the problems of aging in large part stem from the fact that society is unprepared for the older person rather than from factors inherent in the aging process itself.

Optimism was exuded where warranted:

We speak of the gradual decline with aging, and we have some evidence of this on our tests. But perhaps we should think more of the gradual compensations for decline of which the human being is capable, and for which we have considerably more evidence on our tests. The goal of this kind of approach would be to help older people use their available resources optimally, and to maintain their functioning potential, achieving the same ends as formerly, although perhaps by different means.

The message concluded soberly and graciously:

... at this stage of our scientific knowledge we cannot afford to overlook a single fact about aging, nor can we afford to accept a single theory without reservations.

The American Psychological Association, through its Division on Maturity and Old Age, will continue to encourage systematic investigation of the potentialities of older people so that realistic attitudes toward old age based on the realities of the aging process may replace the present day stereotypes and misconceptions.

Representative Oberleder did not preach "Psychology über alles," but if the listeners of their own accord came to regard psychology as *primus inter pares*, well, that would be their privilege.

\* \* \*

**Profession, Know Thyself.** Two blocks down the street, in a modern eight-story structure, lives the American Chemical Society. Its building is newer than ours, its profession older, yet its members, while not in the business of introspection to the degree we are, seem to share the same penchant for, above all else, to our own selves being true.

In 1959, the Board of Directors of ACS authorized a comprehensive survey of member opinion about problems of professional status. Social Re-

search, Inc., of Chicago, conducted the survey; and, once its results were in, even an ostrich would have been hard put to preserve its traditional posture. In looking over the reprint from the March 13, 1961 issue of *Chemical and Engineering News*, we could not help wonder what would happen if "psychologist" were substituted wherever "chemist" appeared.

The survey was no small-scale affair. A detailed questionnaire went to a randomly selected sample of 9,981 ACS members (with a return rate of 44%); depth interviews were conducted with 200 member chemists and chemical engineers chosen at random from 10 communities around the country; interviews were held with 75 nonmember chemists and chemical engineers, 25 businessmen from the chemical industry, and 25 scientists and engineers in other fields. Of the respondents, 42% had doctorate degrees, 84% read at least one ACS journal regularly, and 45% had attended an ACS national meeting during the past 2 years. Psychologists or chemists, these?

Among our chemical brethren, 24% sense a real problem of professional status vis-à-vis employers and the general public; 64% feel a lack of full professional status but do not view it as serious. The origins of the problem are thought by the respondents to lie in salary scales not commensurate with their training, skills, and responsibilities; the lack of autonomy in research; and failure on the part of the public to appreciate the significance of their work. 80% of the ACS members are opposed to joining unions. The hope for improving their professional lot lies, they feel, in more adequate publicity, discussion of professional problems among college students, and development of a code of ethics.

If some of the problems have a familiar ring, others sound even more so. Motivated by the desire to make "significant contributions," our chemical colleagues find themselves differing on many issues along the same kinds of divisional lines as are wont to separate psychologists: differences of opinion are notable between researchers and non-researchers, between academicians and industrial chemists, between chemists and chemical engineers. Turning to the world outside, the ACS members as a group feel less troubled about the possibility of being downgraded in the company of their fellow scientists than they do at the hands of medicine, law, or business. If we may quote a brief passage directly, it will make its own point:

Chemists strongly tend to envy and sometimes denigrate the physicians. This attitude stems principally from the view that the physician does little research. Instead, he is thought of as a practitioner using results produced by the ingenuity of others . . . .

We doubt that Kenneth Clark's *America's Psychologists* served as the inspiration for the ACS survey. But there is many a familiar note here, and we have at least swapped with ACS copies of our own soul-searching efforts. As yet neither APA nor ACS sees any definitive solutions into which to dunk its professional litmus paper; but, when such are ready to be put to the acid test, what more likely professional colleagues to have nearby than the chemists down the street.

\* \* \*

16-15-16-17. What looks like a number series is actually the fluctuation in the number of states having laws relating to the profession of psychology. It happened this way.

As reported some months ago in this column, the Circuit Court Bench of Leon County had ruled earlier that the Florida certification statute was unconstitutional because of an improper delegation of legislative powers to a state agency, namely, the Florida State Board of Examiners of Psychology. Appeal was taken to the Supreme Court of Florida, where the New York State Psychological Association, having had prior experience with charges of unconstitutionality, lent the services of psychologist-barrister John H. Mariano, who submitted a brief as *amicus curiae*. Despite all efforts, however, the Florida certification law was declared unconstitutional by the State Supreme Court on May 6, 1961.

Undaunted, Florida psychologists immediately set about introducing a new bill, one taking into account the findings of the court and intended to rectify the situation. The latter was passed by the Florida House on May 30, its Senate on May 31, and became law on June 22, 1961.

Meanwhile, on April 18, 1961, the Governor of Colorado had signed into law an act providing for the certification and regulation of psychologists and creating a State Board of Examiners, prescribing its powers and duties, and providing penalties for violations. The law, which became effective July 1, 1961, brings the total of states with laws to 17 (plus the Province of Ontario).

What more fitting peroration to the vicissitudes of the past months than the words in which the Colorado law states its declaration of purpose:

It is hereby declared to be the policy of the state of Colorado that, in order to safeguard life, health, property, and the public welfare of this state against unauthorized, unqualified, and improper application of psychology, it is necessary that a proper regulatory authority be established and adequately provided for.

\* \* \*

**Learning Theory: Two-Factor.** At least two psychological associations feel no shame about admitting that their members may need a bit of educating—the 3 R rather than the frilly type at that. Without apologies, the *Newsletter* of the Pennsylvania Psychological Association gets down to a rudimentary "Did You Know That . . ." column about the APA code of ethics. The subject matter is the kind one might flunk a graduate student for not knowing; but those were the days when we could name the capital of each state in the Union.

Not to be outdone, the New York State Society of Clinical Psychologists offers a question box of its own. The latest one deals with psycholegal problems, analyzes a presumably hypothetical situation question-and-answer style, follows with a demurrer from an NYSCP member, concludes with the clincher from the Chairman of its Psycho-Legal Committee.

These newsletter features are hardly psychology's answer to the "Dear Abby" phenomenon. But if they were, they would be in the best tradition of the genre.

**Foreign Aid, Bilateral.** Time was when members of the loyal opposition in Congress attempted to discredit the whole notion of foreign aid by citing such egregious abuses as the sale of refrigerators to Eskimos. The New York State Psychological Association came off much better when it decided what to do with books left with the association by exhibitors after its 1960 Annual Meeting.

NYSPA has donated the lot to the National University of Mexico (through the Interamerican Society of Psychology) and to the Hebrew University of Jerusalem (through the American Friends of the Psychology Department of the Hebrew University). And if that is not a global approach, then we rest our case.

—JOSEPH M. BOBBITT

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*Board of Professional Affairs*

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*State and Professional Affairs*

## Notes and News

**Journal abstracts.** The Council of Editors and the Publications Board of the APA have adopted the practice, now being followed in several non-APA journals, of printing an abstract at the beginning of each article published in the association's prime journals. Such an abstract in many cases, but not necessarily in all, will replace the usual summary at the end of the article. This new practice will be in effect for no later than the 1963 volumes of the prime journals. Since publication lag is variable and averages about a year, authors submitting manuscripts after November 1, 1961 should include the required abstract. It should be typed on a separate sheet of paper and conform to the style of *Psychological Abstracts*. Detailed instructions are available from an Editor or from the APA Central Office.

The American Board of Examiners in Professional Psychology, Inc. conducted oral examinations for 148 candidates in New York, Boston, Chicago, Minneapolis, and Los Angeles in the spring of 1961. The total oral examination included a Professional Field Situation and the following three parts:

Diagnosis, appraisal, or evaluation (the definition of the problem faced by the professional psychologist)

Therapy, counseling, or constructive action (how to deal with the professional problem)

Ethical and professional attitudes and knowledge (the conditions of acceptable professional practice)

ABEPP wishes to express its appreciation to the following Diplomates who served as members of oral examining committees:

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Examining committees were chairmanned by present members of the Board of Trustees: Edward S. Bordin, Kenneth E. Clark, Phillip A. Goodwin, Ralph W. Heine, Edwin R. Henry, Noble H. Kelley, John W. Macmillan, and Edwin S. Shneidman; and by former members of the Board of Trustees: Reign H. Bittner, Stanley G. Estes, Mortimer M. Meyer, Anne Roe, Harold C. Taylor, David Wechsler, Austin B. Wood, C. Gilbert Wrenn, and George K. Yacorzynski.

William D. Neff, of the University of Chicago, represented the APA at the inauguration of George Wells Beadle as Chancellor of the University of Chicago on May 4, 1961.

Anne H. Carlsen, of the Crippled Children's School, Jamestown, North Dakota, represented the APA at the inauguration of John Albert Fisher as President of Jamestown College on May 9, 1961.

Donald W. Van Liere, of Kalamazoo College, represented the APA at the inauguration of James W. Miller as President of Western Michigan University on May 20, 1961.

Robert W. Kleemeier, of Washington University, represented the APA at the Conference on Aging, Ann Arbor, Michigan, on June 19-20, 1961.

George L. Fahey, of the University of Pittsburgh, and Helen I. Snyder, of Pennsylvania State University, represented the APA at the sixteenth Annual National Conference of the Commission on Teacher Education and Professional Standards, State College, Pennsylvania, on June 20-23, 1961.

Edward P. Friesen, of West Vancouver, British Columbia, Canada, died in June 1961.

Arnold Gesell, of the Gesell Institute of Child Development, New Haven, Connecticut, died on May 29, 1961.

Truman Lee Kelley, Professor emeritus of Harvard University, died on May 2, 1961.

Theresa Kirby, of Cincinnati, Ohio, died on April 11, 1961.

Mydelle Kleist, of Berkeley, California, died in May 1961.

Penelope Battle Lewis, of Charlottesville, Virginia, died on April 16, 1961.

Florence Mateer, of Paoli, Pennsylvania, died on May 5, 1961.

Carl Murchison, of Provincetown, Massachusetts, died on May 20, 1961.

Stuart C. Peterson, of Indianola, Iowa, died on April 18, 1961.

Franklin J. Shaw, of Purdue University, died on May 10, 1961.

Clement Staff, of New York, New York, died in 1958.

John V. Van Rheen, of Houston, Texas, died on June 14, 1961.

Samuel Waldfogel, of Harvard University, died in May 1961.

Julian Abrams has accepted the position following the resignation of Michael H. P. Finn as Chief of Psychological Services at Springfield State Hospital, Sykesville, Maryland.

Earl A. Alluisi, of Emory University, has joined Lockheed's Human Factors Research Department as Associate Scientist.

Included in the move of the Santa Barbara office of the American Institute for Research to San Mateo, California, are Dave Angell, Leslie J. Briggs, Robert A. Goldbeck, and Daryl G. Nichols. Benjamin B. Burton will be a consultant during the summer.

Bernard M. Bass, of Louisiana State University, is serving as Visiting Professor of Psychology at the University of California, Berkeley, during the 1961-62 academic year.

Frank A. Beach, of the University of California, Berkeley, has been elected to the American Philosophical Society.

Austin W. Berkeley, of Boston University Graduate School, has been elected Chairman of the VA Area Psychology Advisory Council in Boston, Massachusetts.

**Robert E. Bills** has been appointed Assistant Dean for Research at the University of Alabama.

**Leonard Blank**, formerly with Psychological Services of San Francisco, has been appointed Director of Psychological Training, New Jersey State Institutions and Agencies.

**Murray Blumenthal**, formerly at Chico State College, has been appointed Director of Research for the National Safety Council, Chicago, Illinois.

**John R. Braun**, formerly at Texas Christian University, has accepted the position of Chairman of the Psychology Department at the University of Bridgeport.

**John D. Breish**, formerly in the VA Regional Office, Syracuse, New York, has accepted appointment as Supervising Clinical Psychologist at the Mary Imogene Bassett Hospital, Cooperstown, New York.

In the Department of Psychology at Brooklyn College:

**Wayne Dennis** has relinquished the chairmanship to devote full time to teaching and research. The Chairmanclect is **William H. Ittelson** who will be on leave in 1961-62 to accept a Fulbright appointment at Kyushu University. In the interim **Ivan London** will serve as Acting Chairman.

**Ann Haeberle** and **Solomon Weinstock** have been appointed Assistant Professors.

**Nordli**, Wilson Associates announces that **Earl C. Brown** has joined their staff as a part-time associate.

**John Lott Brown**, of the University of Pennsylvania, is spending the academic year 1961-62 in the Institute for Neurophysiology at the University of Freiburg, Germany.

**Richard A. Cutts** has resigned from the Illinois Office of Public Instruction to become Welfare Executive in the Department of Public Welfare and will be Director of the Adolescent Unit at the Elgin State Hospital, Illinois.

**William E. Davis** has been appointed Assistant Professor at Alaska Methodist University, Anchorage.

**Robert G. Demaree**, formerly with Psychological Research Associates, is now Director of the

Office of Instructional Research and an Associate Professor at the University of Illinois.

**Mitchell Dreese**, of George Washington University, has been granted leave of absence for the academic year 1961-62 to be on the staff at Shippensburg State College.

**Robert H. Dufort** has accepted appointment as Associate Professor of Psychology at Wake Forest College.

**Kenneth G. Nelson**, formerly with the ICA in Ankara, Turkey, and **Ralph E. Dunham**, formerly with the Federal Aviation Agency, are now in the Educational Statistics Branch of the United States Office of Education in Washington, D. C.

**Kenneth W. Eells** will become Psychologist in the Student Health Center at California Institute of Technology.

**Jum C. Nunnally** has been appointed Head of the Department of Psychology at Vanderbilt University; he succeeds **Stanford C. Ericksen** who has retired from the headship to devote more time to teaching and research.

**Seymour Fisher** has left Baylor University College of Medicine to accept a position as Professor in the Department of Psychiatry at the State University of New York College of Medicine, Syracuse.

**Emerson Foulke** is on a leave of absence from the American Printing House for the Blind to do research at the Missouri School for the Blind and to consult with the Psychology Staff at the Psychiatric Child Guidance Section of the St. Louis Health Division.

**Glaser, Snowden, and Associates** announces the dissolution of this partnership effective June 30, 1961.

**Edward M. Glaser** announces the establishment of the firm of Edward Glaser and Associates with the main office in Pasadena, California; the associates are: **Paul A. Albrecht**, **William T. Bourke**, **Wendell R. Carlson**, **Hubert S. Coffey**, **Donald Ehrman**, **Edward M. Glaser**, **Vincent Glaudin**, **Clifford G. Houston**, **Timothy F. Leary**, **Louis Long**, **John B. Marks**, **Nicholas Rose**, **Goodwin Watson**, and **C. Gilbert Wrenn**.

**Robert F. Snowden** announces the establishment of the firm of Snowden, Sullivan, Goodwin, and Holt with offices in Los Angeles and San Francisco, California; the associates are: **Phillip A. Goodwin**, **James M. Holt**, **Robert F. Snowden**, and **Patrick L. Sullivan**.

The Juvenile Diagnostic Center in Columbus, Ohio, dedicated a plaque on May 12, 1961 in memory of **Henry H. Goddard** who served as Director of the center from 1918 to 1923.

**Donald A. Gordon**, of the Bendix Corporation, Ann Arbor, Michigan, was the recipient of the 1961 Samuel M. Burka Award of the Institute of Navigation for his paper "Applications of Human Engineering to Navigational Equipment" published in *Navigation*.

**Sol Gordon** has resigned from the Philadelphia Child Guidance Clinic to become Chief Psychologist in the Middlesex County Mental Health Clinic, New Brunswick, New Jersey.

An honorary Doctor of Science degree was conferred upon **D. O. Hebb** by the University of Chicago at the recent convocation inaugurating the new Chancellor.

Bethany College conferred the honorary degree of Doctor of Science upon **Francis W. Hibler**, of Rohrer, Hibler, and Replogle.

**Rudolf Holzinger**, formerly of the British Columbia Penitentiary, Canada, is now Chairman of Research, Mental Health Division, Iowa Correctional and Juvenile Institutions in charge of a research project on the use of LSD 25 in the treatment of delinquents.

Friends and associates of **Carl I. Hovland**, late Sterling Professor of Psychology at Yale University, are creating a scholarly memorial to his contributions to the university, to psychology, and to science generally. Persons interested in contributing to this memorial may write checks to: Yale University-Hovland Memorial Fund. They should be mailed to the Department of Psychology at Yale University.

**Henry A. Imus**, of the United States Naval School of Aviation Medicine, was elected a fellow in the Aerospace Medical Association.

**J. Robert Kantor** was awarded an honorary degree of Doctor of Science by Denison University.

**Paul E. Kauffman** has become Research Coordinator in the Department of Clinical Psychology at Hawthorne Center, Northville, Michigan.

**Leonard J. Kazmier**, formerly at Wayne State University, has been appointed Assistant Professor in the College of Commerce at the University of Notre Dame.

**Otto Klineberg**, of Columbia University, received the 1961 annual award by the New York Society of Clinical Psychologists for "outstanding contributions to the science and profession of clinical psychology."

**Herbert E. Krugman**, formerly with Raymond Loewy/William Snaith, Inc., has been appointed Vice-President and Associate Director of Research for Ted Bates and Company.

**Martin I. Kurke**, formerly with Dunlap and Associates, has accepted a position as Operations Analyst with the Combat Operations Research Group, operated for the United States Continental Army Command by Technical Operations, Inc. at Fort Monroe, Virginia.

**Matthew Radom**, of Rutgers University, has been elected to the Board of Directors and **James F. Lawrence** has been elected to the Board of Directors and made a Vice-President of Richardson, Bellows, Henry, and Company.

**Francis J. Lee**, formerly with the Raytheon Company, has been appointed Director of Education for the Executive Dynamics Foundation in Los Angeles.

**Roger T. Lennon**, of Harcourt, Brace, and World, Inc., has been elected to the Board of Directors of the American Textbook Publishers Institute.

**Edwin Levy**, formerly in the Dumont-Bergenfield Guidance Center, has been appointed to the Department of Student Services at the City College in New York.

**Sidney J. Levy**, of Social Research, Inc., has been named Visiting Professor in the School of Business at Northwestern University, for the 1961-62 academic year.

**William B. Macomber** has resigned from the Volusia County Health Department to become a school psychologist with the Montgomery County Board of Education, Rockville, Maryland.

**Donald N. Michael**, currently at the Brookings Institution, Washington, D. C., will become Director of Research Planning and Operations at the Peace Research Institute.

Recent appointments by the Division of Medical Services in the Community Mental Health Program of the Minnesota State Department of Public Welfare are:

**Ralph T. Hinton**, formerly in Montana State Hospital, Warm Springs, to the Northwestern Mental Health Center, Crookston

**Harold N. Blackwell**, of the University of Western Ontario, to the Northern Pines Mental Health Center, Little Falls

**James A. Howard**, formerly with Community Rehabilitation Industries, Long Beach, California, to the Southwestern Mental Health Center, Luverne

**Clifford E. Schroeder**, of the Lansing Mental Health Center, Michigan, to the South Central Mental Health Center, Owatonna

**Raymond C. Fisher**, formerly in the Eugene Medical Center, Oregon, and **Richard R. Clappitt**, formerly in the Columbus Psychiatric Institute, Ohio, to the Central Minnesota Mental Health Center, St. Cloud

**Dorothy P. Nielson**, formerly with the Alaska Crippled Children's Association, Fairbanks, to the West Central Mental Health Center, Willmar

**Victor E. Montgomery**, formerly with the Boeing Company, has accepted an appointment in the Department of Psychology at the University of Redlands.

**C. Robert Pace**, formerly at Syracuse University and the Center for Advanced Study in the Behavioral Sciences, has accepted an appointment as Professor of Higher Education at the University of California, Los Angeles.

**Robert A. Pratt**, formerly with the Pillsbury Company, has been appointed Field Personnel Development Manager at Mead Johnson and Company, Evansville, Indiana.

**John W. Reid**, formerly at Newark College of Engineering, has been appointed Head of the Department of Psychology at Cedar Crest College; during the summer he is teaching psychology at Drexel Institute of Technology.

**Irwin M. Rosenstock** has accepted an appointment in the School of Public Health at the University of Michigan as Associate Professor of Community Health Services.

**William W. Rozeboom**, formerly at St. Olaf College, is a new member of the psychology staff at Wesleyan University.

**Roy Schafer** has joined the mental hygiene staff in the Yale University Department of University Health. **Carl N. Zimet** has been appointed Acting Chief of the Clinical Psychology Service in the Department of Psychiatry in the Yale University School of Medicine.

**Leonard Schneider** has been appointed Head of the Department of Psychology at Los Angeles State College.

**Carleton F. Scofield** has been appointed Acting Chancellor of the University of Kansas City.

**Marvin Siegelman**, formerly at Harvard University, has accepted a position as Assistant Professor of Education at the City College of New York.

**Robert E. Silverman** has been appointed Chairman of the Department of Psychology in New York University's College of Arts and Science.

**George B. Simon**, formerly with the Link Division of General Precision, Inc., has accepted the position of Chief of Life Sciences Systems in the Aeronautical Division of Minneapolis-Honeywell Regulator Company, Minneapolis.

**Durganand Sinha**, of the Indian Institute of Technology, has been appointed Professor and Head of the newly created Department of Psychology at Allahabad University.

The Southern California Permanente Medical Group has created a new Department of Psychiatry:

**Fred Goldstein**, formerly with the Los Angeles Psychiatric Service, has been appointed Chief Clinical Psychologist.

**F. Harold Giedt**, formerly at the VA Hospital, Sepulveda, has been designated Research Director.

**Leslie Navran**, formerly with Glaser, Snowden, and Associates, will be responsible for community relations and educational programs.

**Larry Stein**, of the Wyeth Laboratories, Philadelphia, Pennsylvania, has been awarded the A. E. Bennett Neuropsychiatric Research Foundation Award for his original studies on how drugs influence behavior by affecting the brain.



Linden D. Summers, Jr. has resigned from Cooperstown Central School to become Assistant Professor of Education at Colgate University.

An exhibition, *The Career of a Psychologist: Retrospect—A Memorial Exhibition for Percival M. Symonds*, will be held in the Rotunda of the Low Memorial Library at Columbia University on August 31–September 8, 1961. All members and guests of the APA are invited.

At the System Development Corporation, Santa Monica, California:

Launor F. Carter, the Director of Research, has been appointed Vice-President.

Raphael J. Dubrovner and Lloyd V. Searle, formerly in the United States Naval Missile Center, Point Magu, California, and Henry F. Gaydos, formerly with Collins Radio, have joined the staff of the Training Development Branch.

Claude Thompson has been appointed Head of the Department of Psychology and Sociology at Jacksonville University.

Elizabeth Faulk, Leonard Horwitz, Phyllis Kreinik, Donald Leventhal, John Myers, and Paul Pruyser were elected to the Executive Committee of the Topeka Psychological Association.

The first annual Dorothy H. Hughes Memorial Award, established by the Westchester Association of School Psychologists, has been presented to Gilbert M. Trachtman, President of the Nassau County Psychological Association.

H. Floyd Vallery, of Auburn University, will be on leave of absence to serve as consultant to the University of Dacca, Pakistan, in a program of student personnel services.

Richard R. Willey has been appointed Deputy Chief of the Division of Research Grants at the National Institutes of Health.

Julian Wohl, of the University of Toledo, has been appointed Fulbright Lecturer in Psychology at the University of Rangoon for the academic year 1961–62.

Paul Thomas Young, Professor emeritus of Psychology of the University of Illinois, was awarded an honorary Doctor of Science degree by Occidental College at the recent commencement exercises.

Gweneth Zarfoss is with the Governor's Committee for the Handicapped, Pennsylvania State Department of Public Instruction, Harrisburg.

The following rosters of officers have been announced:

**California State Psychology Examining Committee**

Chairman: Robert G. Kaplan

Vice-Chairman: Thomas Harrell

Secretary: Norman Henderson

**Essex County Society of Clinical Psychologists in Private Practice**

President: Stanley Moldawsky

President-elect: Morris Goodman

**Fort Wayne-Lima Psychological Association**

President: Mary Amatora

**Midwest Human Factors Society**

President: Richard J. Hornick

**Nassau County Psychological Association**

President: Jack L. Herman

President-elect: Edward Levin

Past President: Gilbert M. Trachtman

Corresponding Secretary: Irwin Lesser

Treasurer: Harry Haselkorn

**New York Society of Clinical Psychologists**

President: Bertram Pollens

President-elect: Wallace Gobetz

Past President: Harry Sands

Executive Secretary: Edwin C. Fancher

Treasurer: Herbert Fensterheim

**Orange County Psychological Association**

President: James P. Judge

President-elect: Everett Shostrom

Secretary-Treasurer: Richard Stott

**Professional Association of the Postgraduate Center for Psychotherapy**

President: Theodora Abel

Treasurer: Zanel Liff

**Psychological Association of Western New York**

President: Alfred B. Pomerantz

President-elect: Doris R. Miller

Secretary: Herman J. P. Schubert

**Syracuse Psychological Association**

President: Sidney A. Orgel

Secretary: Ruth Anne Funk

Treasurer: Leonard Hersher

The Alfred Adler Institute (333 Central Park West; New York City) offers a 3-year program for psychiatrists, psychologists, social workers, and other professionals designed to provide an understanding of the dynamics of personality and interpersonal relationships and to teach psychothera-

peutic methods and techniques. Persons interested in specific courses may enroll as nonmatriculated students. For further information write for the institute's *Bulletin of Information*.

The *Creative Talent Awards Program* of the **American Institute for Research** announces the deadline date of September 30, 1961 for submission of nominations to be considered for this year's awards. The program was established to encourage the development and application of creative talent to the problems of advancing the science of human behavior, and particularly to encourage new, original, and provocative research in psychology. The first annual award of \$1,000 and two awards of \$500 each will go to graduate students whose dissertations are judged as showing the most promise for creative contributions to scientific knowledge in three subject areas within the field of psychology or the study of human behavior. A doctoral candidate may be nominated by his major advisor, the chairman of the department of psychology, or any member of the APA. Dissertations accepted during the period July 1, 1960 through August 31, 1961 will be eligible for the first annual awards. For further details about the Creative Talent Awards Program write to: AIR; 1808 Adams Mill Road, N.W.; Washington 9, D. C.

The *School Psychology Program* in the School of Education at **Boston University**, as a result of a grant under the National Defense Education Act Graduate Fellowship Program, will now offer a 2-year program leading to a Certificate of Advanced Graduate Studies and a 3-year program leading to a Doctor of Education degree in School Psychology.

The **Institute for Psychoanalytic Training and Research** has been established in the recognition that, despite existing multiple sources for training in various forms of psychotherapy, there still exists a need for organized facilities providing a thorough grounding in classical psychoanalysis in a common framework for the professions of medicine, psychology, and social work. Qualified persons from these fields are now being interviewed for fall registration. The minimum requirement for psychologists is 45 credits of graduate work. Interested persons should write for a bulletin to: IPTR; 8 Gramercy Park; New York 3, New York.

The **International Society for Rehabilitation of the Disabled**, in cooperation with the Reader's Digest Foundation, has established the Reader's Digest *International Rehabilitation Awards* to be presented to societies, associations, and interested groups which have done most to advance and improve rehabilitation services and facilities for the handicapped within their communities during the 2-year period January 1, 1961 to December 31, 1962. The seven awards, ranging from \$500 to \$2,500, will be presented at the ninth World Congress of the society in Copenhagen, June 1963. Inquiries concerning this competition may be addressed to: ISRD; 701 First Avenue; New York 17, New York.

The **Inter-University Committee on Travel Grants**, representing American colleges and universities, announces that it is soliciting inquiries and applications from graduate students and scholars who wish to spend all or part of the academic year 1962-63 engaged in study and research in the Soviet Union as participants in the academic exchange between the United States and the USSR. American citizens under 40 years of age are eligible if they are graduate students, postdoctoral researchers, or faculty members at the time of application. A knowledge of Russian adequate to the needs of study and research is required. Applications must be received no later than December 15, 1961 to be considered for the 1962-63 exchange. For further information and applications write to: Stephen Viederman, Deputy Chairman; IUCTG; 719 Ballantine Hall, Indiana University; Bloomington, Indiana.

The **James McKeen Cattell Fund** invites requests for grants-in-aid in the field of applied psychology to be awarded in 1962. Applications should be filed before January 15, 1962. For procedural and other relevant information write to: Elsie O. Bregman, Secretary-Treasurer; 425 Riverside Drive-11C; New York 25, New York.

Applications will be accepted through September 5, 1961 by the **National Science Foundation** for fellowships under the *Postdoctoral Fellowship program*, including awards in psychology (other than clinical). To be eligible, applicants must be citizens or nationals of the United States, possess special aptitude for advanced training, and must hold the doctoral degree or have equivalent educa-

tion and experience. The stipend is \$5,000 per year. Fellows may engage in study and/or research at any appropriate nonprofit institution in the United States or any appropriate nonprofit foreign institution. Application materials may be obtained by writing to: Fellowship Office, National Academy of Sciences-National Research Council; 2101 Constitution Avenue, N.W.; Washington 25, D. C.

The *Division of Biological and Medical Sciences* of the National Science Foundation announces that the next closing date for receipt of basic research proposals in the life sciences is September 15, 1961. Proposals received prior to that date will be reviewed at the fall meetings of the foundation's advisory panels, and disposition will be made approximately 4 months following the closing date. Proposals received after the September 15, 1961 closing date will be reviewed following the spring closing date of January 15, 1962. Inquiries should be addressed to: DBMS, NSF; Washington 25, D. C.

The *Parapsychology Foundation* is offering an award of \$1,000 for the best treatise concerning parapsychology and its relation to other scientific disciplines. The treatise must be original and may include previously unpublished research data. The award is open to anyone regardless of education or location. Treatises must be submitted by December 15, 1961. Entry blanks and supplementary information may be obtained by writing to: Administrative Secretary; PF, Inc.; 29 West 57 Street; New York 19, New York.

The *Psychoanalytic Studies Institute of the Philadelphia Mental Health Clinic* is now accepting applications for enrollment for the year 1961-62. For further information write to: Executive Secretary, PSI; 1235 Pine Street; Philadelphia 2, Pennsylvania.

A Medical Psychology Section has been added to the *Division of Psychiatric Medicine at Scripps Clinic and Research Foundation*, under the direction of David A. Rodgers. Candidates for postdoctoral research fellowships in psychology will be expected to make application, under sponsorship of the foundation, to other agencies for support. Interested persons may contact: David A. Rodgers or Frederick J. Ziegler; SCRF: 476 Prospect Street; La Jolla, California.

The *Social Science Research Council's* annual announcement describing fellowships and grants to be awarded in 1961-62 will be ready for distribution in early September. Among the programs described are: Research Training Fellowships (pre-doctoral and postdoctoral), Faculty Research Fellowships, Grants-in-Aid of Research, International Conference Travel Grants, and grants for research in the social sciences and humanities on certain foreign areas. Address requests for the announcement to: Fellowships and Grants, SSRC; 230 Park Avenue; New York 71, New York.

Support for advanced study in the *Doctoral Program in Social Work and Social Science* at the *University of Michigan* is available through a number of traineeships provided by the National Institute of Mental Health and by the Russell Sage Foundation. Stipends range from \$1,830 to \$4,350. Fellowship applications will be received up to February 1, 1962. For detailed information and application forms write to: Henry J. Meyer; School of Social Work, University of Michigan; Ann Arbor, Michigan.

Five fellowships for postdoctoral study in the *Center for the Study of Higher Education* at the University of Michigan are available to those entering or intending to enter careers in college or university administration. For application forms and further information write to the center.

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H. Max Houtchens, Chief of the Clinical Psychology Division of the Veterans Administration, has initiated, through the VA Hospital in Coral Gables, Florida, a special training program for *Cuban psychologists-in-exile*. Four positions have been established with the refugee psychologists appointed at advanced levels for a 6-month period. Charles A. Stenger is directing the program, and Malcolm Kushner is in charge of training. The staff of the Psychology Service at the hospital is also engaged in a study of the adjustment of Cuban refugees to their present crisis. The study tries to evaluate reactions as professional individuals, gauge professional adjustment, and delineate socioeconomic attitudes by means of a questionnaire.

Howard G. Miller and John Oliver Cook, of North Carolina State College, have received a grant under the Cooperative Research Program of the

United States Department of Health, Education, and Welfare for a series of studies aimed at making learning easier and faster by determining the effects of guidance on several types of learning.

Work has begun on the initial stages of the new **Encyclopedia of the Social Sciences** under the editorial direction of Bert F. Hoselitz. In order to encompass the many advances and most recent developments within the social sciences, the present project envisages the production of a completely new work rather than a revision of the original encyclopedia. Simultaneous publication of the planned 12-15 volumes is tentatively scheduled for 1965. The contents of the encyclopedia will be distributed fairly evenly among the various social sciences: anthropology, economics, political science, psychology, and sociology. Guidance for the work of the encyclopedia will be provided by an editorial board of social scientists from many nations under the chairmanship of W. Allen Wallis, of the University of Chicago. In addition, scholars in the relevant fields will be asked to serve as consultants. A group of associate editors and assistants is being assembled in the new offices of the encyclopedia at 5836 Greenwood Avenue, Chicago 37, Illinois.

The **James McKeen Cattell Fund** has awarded the following grants-in-aid:

**Ernest G. Beier**, University of Utah, "Conditions of Recognition of Subliminal Stimuli"

Mental Research Institute of the **Palo Alto Medical Foundation**, for partial support of first year costs of a new journal *Family Process*

The **National Institute of Mental Health** has awarded the following grants:

**Harry F. Harlow**, University of Wisconsin, for construction and initial operation of a four-story building for the Primate Laboratory

**S. D. Kaplan**, Lincoln State Hospital, Lincoln, Nebraska, for a study on changing the biases of antagonistic homeostats by centrally acting drugs

**Arnold Miller**, of Montana State University, for research on intermodal perception as it relates to personality styles

**Gardner Murphy** and **John Santos**, Menninger Foundation, Topeka, Kansas, for a research project "Program in Reality Testing" the purpose of which is to continue and expand the project on "Studies in Perceptual Learning"

The new **Psychological Testing Laboratory** of the University of Kansas City was formally dedicated on May 10, 1961. The laboratory was built

with the aid of funds contributed by the American TEKE Foundation. Bernard Kleinman is Director of the laboratory.

The University of Kansas has received funds from the Easter Seal Research Foundation for the support of a **Research Associate in Somatopsychology and Rehabilitation**. Beatrice A. Wright has accepted this position on a half-time basis, beginning in September 1961. The Children's Rehabilitation Unit of the University of Kansas Medical Center will serve as cooperating rehabilitation agency. Wright's activities will be co-ordinated with the Psychology Department's research and training activities in somatopsychology, under the direction of Franklin C. Shontz.

A 5-year project has been initiated at the Children's Village, Dobbs Ferry, New York, to demonstrate the feasibility of a comprehensive vocational rehabilitation program, encompassing both residential and aftercare, in meeting the needs of emotionally disturbed delinquent adolescents. The project is sponsored by the United States Office of Vocational Rehabilitation.

Gratis copies of a bibliography on "Ego, Self, and Super-Ego," containing 570 items, are available to the first 100 persons who write to: Department of Psychology, University of Hawaii, Honolulu 14, Hawaii.

Copies of the monograph, **Personal Response and Social Organization in a Health Campaign: An Evaluation of a Mass X-Ray Survey in New York City**, by Charles A. Metzner and Gerald Gurin may be obtained gratis from: Bureau of Public Health Economics, School of Public Health, University of Michigan; Ann Arbor, Michigan.

Gratis copies of the report, "Remotivation: Fact or Artifact," by the Remotivation Research Project conducted at the St. Louis State Hospital may be obtained from: Ralph S. Long, Jr., Director of Remotivation; St. Louis State Hospital; 5400 Arsenal Street; St. Louis, Missouri.

The second progress report has been prepared of the research project on "Secondary Education in a State Mental Hospital" (see announcement of first progress report on page 374 of the June 1960 *American Psychologist*). A final, comprehensive report will be issued after the project officially ends August 1, 1962.



The United States Office of Education is supporting the development of a **pilot information service of educational research materials** in the Center for Documentation and Communication Research at Western Reserve University. The primary purpose of this program is to develop and put into operation on a pilot basis a suitable information retrieval system which will permit the detailed analysis of educational research material and selective dissemination, based on individual interests and requests on a current basis. *Please send us questions in your fields* that represent the subject matter as well as the generality of selectivity that might satisfy you in a service that would keep you currently informed of everything going on in areas of educational research of interest to you. Your questions will be useful in pretesting the pilot system on the basis of user requirements. A significant sampling of questions will be searched, and the results made available to the sender for evaluation. Please send your questions to: Allen Kent, Associate Director; Center for Documentation and Communication Research, School of Library Science, Western Reserve University; Cleveland 6, Ohio.

A review of technical developments in the **analysis of EEG data** was presented by Robert S. Daniel, of the University of Missouri, on April 27, 1961 to a conference at the Greater Kansas City Mental Health Foundation.

A seminar on **Interpersonality Synopsis** was conducted by Donald D. Glad, of the Greater Kansas City Mental Health Foundation, on May 16-17, 1961 in the Psychophysiological Laboratory at Duke University.

The Midwest Human Factors Society held a symposium, May 19, 1961, on **The Role of Human Factors in System Development**. For further information write to: Richard J. Hornick; MHFS; 600 South Michigan; Chicago 5, Illinois.

The Institute for the Crippled and Disabled (23 Street and First Avenue; New York 10, New York) held a conference in May 1961 on new trends and techniques for serving the handicapped.

Carleton Scofield, of the University of Kansas City, spoke in May 1961 to the Greater Kansas City Psychological Association on **"Research Methodology in Psychological Warfare."**

Ruth W. Berenda delivered three **Danforth Foundation Lectures** at Barnard College, Columbia University on: "The Foundations of Interpersonal Psychoanalysis," "The Role of Love in Per-

sonality Development," and "The Religious Dimensions and Some Distortions of Love in Personality Development."

In June 1961 under the joint auspices of the University of Amsterdam and the Amsterdam Psychoanalytic Institute, Reuben Fine gave a series of eight lectures at the university in which he attempted an integration of experimental psychology and psychoanalysis.

The Essex County (New Jersey) Society of Clinical Psychologists in Private Practice sponsored a symposium in June 1961 on **The Treatment of the Emotionally Disturbed School Child**.

A symposium on **Body Image in Pathological States** was held on June 29-30, 1961 at the VA Hospital, Houston, Texas.

The **Work of Melanie Klein** was the subject of the symposium on June 30-July 1, 1961 held in Buenos Aires, Argentina, by the Argentine Psychoanalytic Association (Anchorena 1357, Buenos Aires).

**"Man and Society,"** a series of lectures in July 1961 sponsored by the Psychology Department of New Mexico Highlands University, was concerned with the relationship between psychology, psychiatry, and the social community.

A research conference on **Behavior Genetics** will be held August 14-September 3, 1961 at the Center for Advanced Study in the Behavioral Sciences under a grant from the National Science Foundation. The Chairman is Jerry Hirsch, of the University of Illinois.

The seventh Annual Convention of the **Puerto Rican Psychological Association** will be held on August 24-26, 1961 at the University of Puerto Rico. Further inquiries may be addressed to: Carlos Albizu-Miranda; Department of Psychology, College of Social Sciences, University of Puerto Rico; Río Piedras, Puerto Rico.

The fifty-sixth Annual Meeting of the **American Sociological Association** will be held in St. Louis, Missouri, on August 29-September 2, 1961. For further information write to: Grace D. Hooper; ASA; New York University; Washington Square, New York 3, New York.

The second **Annual Bionics Symposium** will be held at Cornell University on August 30-September 1, 1961.

A 2-day conference on **Training in Business, Industry, and Government** will be held at Purdue University on September 28-29, 1961 for training directors and others whose duties involve the development of personnel. For further information write to: Lawrence F. Greenberger; 209 Education Building, Purdue University; Lafayette, Indiana.

A conference on **Application of Digital Computers to Automated Instruction** will be held on October 11-13, 1961 in Washington, D. C., under the sponsorship of the System Development Corporation and the Office of Naval Research. For further information write to: Washington Liaison

Office, System Development Corporation; 1725 Eye Street, N.W.; Washington 6, D. C.

The thirteenth Annual Conference of the **Western Institute on Epilepsy** will be held on October 11-14, 1961 in San Antonio, Texas. For further information write to: Frank Risch; WIP; 3097 Manning Avenue; Los Angeles 64, California.

The nineteenth **Annual Reading Institute** at Temple University will be held in Philadelphia, Pennsylvania, January 22-26, 1962, with the theme "Reading in Modern Communication." For further information write to: Reading Clinic, Department of Psychology, Temple University; Philadelphia 22, Pennsylvania.

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## Convention Calendar

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**American Psychological Association:** August 31–September 6, 1961; New York, New York

*For information write to:*

Janice P. Fish  
American Psychological Association  
1333 Sixteenth Street, N.W.  
Washington 6, D. C.

**Eastern Psychological Association:** April 27–28, 1962; Atlantic City, New Jersey

*For information write to:*

Marvin Iverson  
P. O. Box 601  
Garden City, New York

**New England Psychological Association:** October 20–21, 1961; Waltham, Massachusetts

*For information write to:*

M. C. Langhorne  
Department of Psychology  
Trinity College  
Hartford 6, Connecticut

**Midwestern Psychological Association:** May 3–5, 1962; Chicago, Illinois

*For information write to:*

George R. Meyer, Secretary-Treasurer  
1314 Kinnear Road  
Columbus 12, Ohio

**Southeastern Psychological Association:** March 29–31, 1962; Louisville, Kentucky

*For information write to:*

Ray H. Bixler  
Department of Psychology  
University of Louisville  
Louisville 8, Kentucky

**National Society for Crippled Children and Adults:** November 17–21, 1961; Denver, Colorado

*For information write to:*

National Society for Crippled Children and Adults  
2023 West Ogden Avenue  
Chicago 12, Illinois

**Southern Society for Philosophy and Psychology:** April 19–21, 1962; Memphis, Tennessee

*For information write to:*

Dan R. Kenshalo  
Department of Psychology  
Florida State University  
Tallahassee, Florida

**American Association for the Advancement of Science:** December 26–31, 1961; Denver, Colorado

*For information write to:*

Raymond L. Taylor  
American Association for the Advancement of Science  
1515 Massachusetts Avenue, N.W.  
Washington 5, D. C.

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